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UNITED STATES DEPARTMENT OF COMMERCE
Daniel C. Roper, Secretary

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CENSUS OF BUSINESS: 1935

WHOLESALE DISTRIBUTION

ELECTRICAL WHOLESALING

JUNE, 1937

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CENSUS OF BUSINESS: 1935

Fred A. Gosnell, Chief Statistician
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ELECTRICAL WHOLESALING: 1935

Prepared Under the Supervision of
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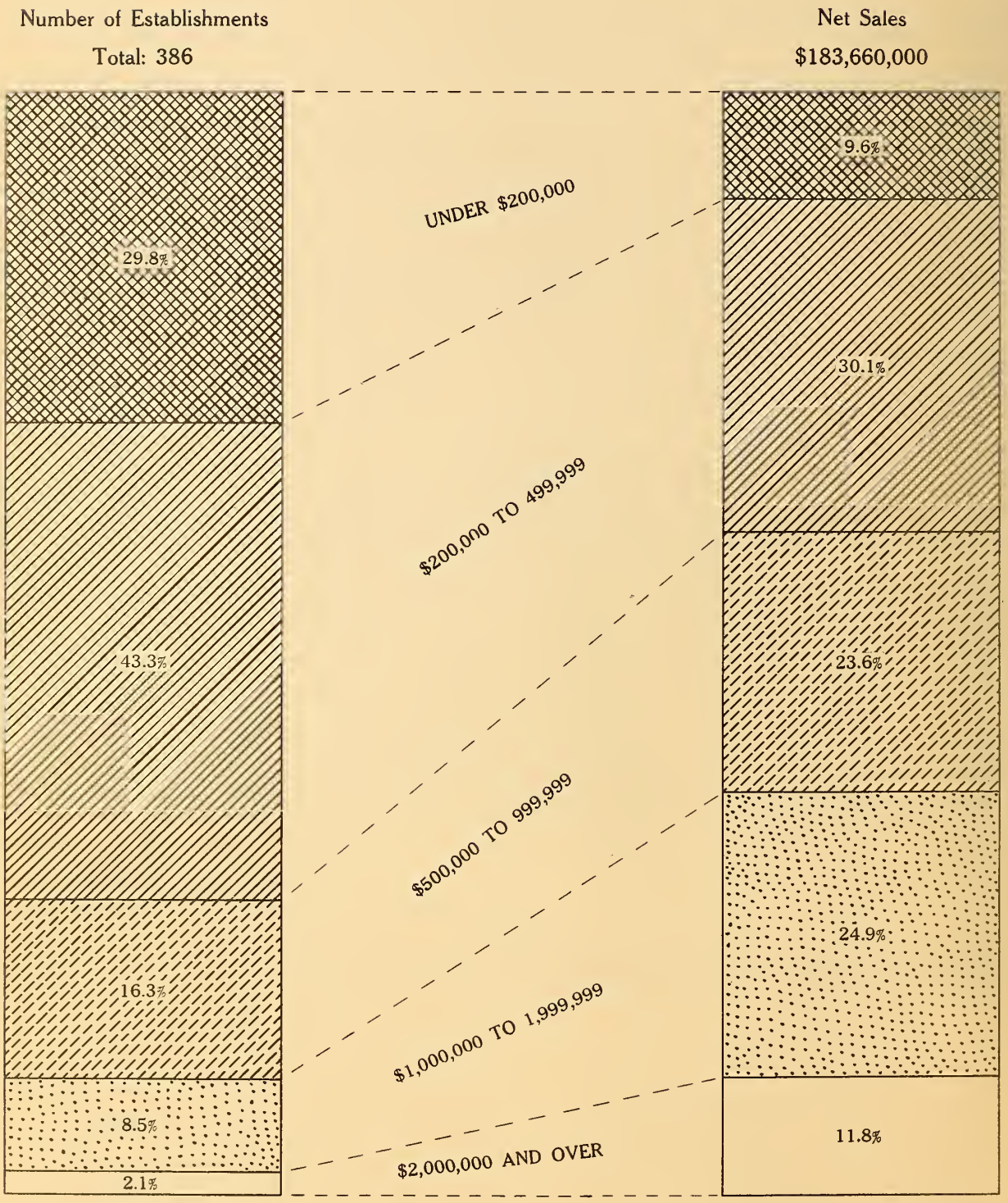
CHART 1.- ESTABLISHMENTS AND SALES OF 386 FULL-LINE ELECTRICAL DISTRIBUTORS BY BUSINESS SIZE GROUPS



BUREAU OF THE CENSUS

WHOLESALE DISTRIBUTION: 1935

Electrical Wholesaling

Foreword

This is one of a series of special reports on Wholesale Distribution, a part of the Census of Business, 1935. The Statistics were collected in 1936 by a field canvass of wholesale establishments in every State, city and county in the United States, by the Bureau of the Census, with funds provided by the Works Progress Administration. They cover the operations of wholesalers during the year 1935.

Special reports on wholesale distribution are prepared under the supervision of John Albright, Chief of Wholesale Trade, by Dr. Albert Haring.

The field canvass was based upon wholesale establishments which are defined, for census purposes, as places of business where goods are sold in a wholesale manner. Selling on a wholesale basis is selling primarily to retailers, institutions, industrial users and other wholesale organizations, for resale or further processing or business use, rather than for personal or household consumption. No establishments are included in this report unless 50 percent or more of their sales were made at wholesale. For census purposes, therefore, wholesale establishments do not include peddlers or others selling at wholesale without recognizable places of business; nor wholesaler-retailers and manufacturer-wholesalers when their wholesaling activities are secondary; nor central administrative and other auxiliary establishments of wholesale concerns when reported as separate establishments.

The detailed analysis of electrical wholesaling is preceded by a brief examination of the electrical manufacturing industry and the primary methods used in distributing its output. The emphasis throughout, however, is on the wholesale phase of electrical distribution.

The Electrical Industry

Scope of the Electrical Industry.-In determining the quantity of electrical merchandise produced and sold in the United States, one is immediately confronted with the problem of defining electrical goods. The nature of manufacturing is such, moreover, that both electrical and non-electrical articles are frequently fabricated in the same plant. Items such as nuts, bolts, rubber and friction tape, in addition, are widely used in the electrical industry although, as commodities, they are non-electrical. Similarly, sewing machines, washing machines, and refrigerators become electrical only when a motor has been attached. For the purpose of this study, industries have been included only when substantial quantities of their output move into consumption through electrical wholesalers (See Table 2).

Classification by the Census of Manufactures.-The electrical industry is broken into several classifications by the Census of Manufactures (*), the main one being "Electrical Machinery, Apparatus and Supplies." Here are included all classes of machinery, apparatus and supplies for employment directly in the generation, storage, transmission, transformation, or utilization of electrical energy. This industry is the most important single source of merchandise for electrical wholesalers as shown in Table 1.

Not included under "Electrical Machinery, Apparatus and Supplies," are lighting equipment, washing machines, radios, sewing machines, calculating machines, rubber and friction tape, and a number of additional items usually stocked by electrical wholesalers. The special classifications where these products appear are, in addition, mainly non-electrical. The "Radio Apparatus and Phonographs" group includes non electrical phonographs, record blanks, and records, as well as radios, dictaphones and similar strictly electrical goods. The classification designated as "Refrigerators and Refrigerating and Ice-Making Apparatus" lumps mechanical and non-mechanical equipment together. The same is true in the washing machine industry. Nevertheless, these industries are important sources of merchandise for the electrical trade.

Manufacturers' Sales of Electrical Goods.-The Census of Manufactures is interested in the production of merchandise during a given year, regardless of whether or not the goods are sold during the year in which they are fabricated. In a study of marketing and distribution, however, sales are more important than production; therefore the figures in Table 1 have been taken from Distribution of Manufacturers' Sales: 1935, a part of the Census of Business, rather than from the Census of Manufactures: 1935.

In Table 1, it is found that 1,408 plants classified in the electrical machinery, apparatus and supplies industry sold merchandise whose value was $1,084,266,000 in 1935. When the lighting equipment (sales of $85,341,000), radio (sales of $195,323,000), refrigerator (sales of $238,765,000), and washing machine classifications are added, the total becomes $1,665,931,000. These industries furnish the bulk of the merchandise which electrical wholesalers sell.

Other industries were omitted because the proportion of non-electrical merchandise appeared too high. A few of the classifications excluded for this reason are wire, clocks and time recording devices, bolts and nuts, and also food slicers and other food machines. In addition, the products of certain industries were not marketed very commonly through electrical wholesalers. The sewing machine and beauty parlor equipment industries are illustrations.

(*) Industry Classifications for the Census of Manufactures: 1935.

The "Rubber Goods Other Than Tires, Inner Tubes, and Boots and Shoes" industry does contain rubber and friction tape but also lists rubber hose, druggists' sundries, rubber brushes, rubber heels and soles, etc. Similarly, "Signs and Advertising Novelties" is a classification which embraces almost all types of signs and advertising novelties (match boxes, calendars, etc.) as well as electric signs. On this account, although the five industries listed in Table 1 obviously do not include all electrical merchandise, it nevertheless appears most useful to limit the analysis to this group.

An examination of the industries in Table 1 shows that the major source of electrical merchandise is the electrical machinery, apparatus and supply industry with 65.1 percent of the total. Refrigerators rank second with 14.3 percent of total sales, followed by radios with 11.7 percent, lighting equipment 5.2 percent, and washing machines 3.7 percent.

TABLE 1.--SALES BY MANUFACTURERS OF ELECTRICAL PRODUCTS IN THE UNITED STATES: 1935

(selected industry classications only)

Industry	Number of plants	Reported sales	Percent of total
Total of industry shown	2,419	$1,665,931,000	100.0
Electrical machinery, apparatus and supplies	1,408	1,084,266,000	65.1
Lighting equipment	501	85,341,000	5.2
Radio apparatus and phonographs	195	195,323,000	11.7
Refrigerators and ice making apparatus	274	238,765,000	14.3
Washing machines	41	62,236,000	3.7

Even in the case of electric machinery, apparatus and supplies, it must not be assumed that all sales of manufacturers were made to electrical distributors. In this broad classification, for example, are listed "miscellaneous electric household appliances," under which caption small electric fans would be included. Such fans are commonly sold through hardware, department store, and drug store retail outlets and are handled both by electrical wholesalers and the specialized wholesalers who service these trades. Large amounts of electrical merchandise also move directly from manufacturer to industrial user. It is necessary, therefore, to examine the methods used by manufacturers to dispose of their products.

Primary Channels of Distribution Used by Manufacturers

Of the 2,419 plants listed in Table 1, applicable reports covering distribution of sales were received from 2,326 as shown in Table 2. The distributed sales of these 2,326 plants amounted to $1,226,398,000, which figure differs from the total shown in Table 1 by the omission of the sales of the 39 plants unable to distribute their sales, and of interplant transfers (used exclusively by 54 plants) and of sales not allocated to usual channels. The general picture of primary channels of distribution requires detailed analysis because considerable variation occurs among the selected industries in Tables 2 and 3. On this account, each major channel of distribution will be discussed separately.

Sales to Own Wholesale Branches.-In the Census of Business, 1935, wholesale branches were defined as places of business maintained by manufacturers, primarily for the purpose of disposing of their output. When a sales organization is located at the plant, its operations are considered a part of the normal operation of the plant. When sales organizations are located elsewhere than at the plant they are classified as "own wholesale branches." (Own wholesale branches are included in the Wholesale Census as manufacturers' sales branches when they carry stock and as manufacturers' sales offices when no stocks for delivery are kept on hand.) Sales to own wholesale branches thus refer to the proportion of total plant sales which are disposed of through owned branch offices located physically apart from the plant.

Of the five selected industries, only two dispose of as much as one-fifth of their sales through their own wholesale branches. These are electrical machinery, apparatus and supplies (28.2%) and refrigerators (22.0%). The other three use wholesale branches only to a very minor degree (lighting equipment 2.6 percent of sales, radio 3.7 percent of sales, washing machines 7.9 percent of sales). Except for the washing machine industry where 5 plants out of 38 owned wholesale branches, fewer than one-tenth of the plants used this channel of distribution, and, where comparisons with 1929 are possible, this channel appears to be declining in popularity.

Sales to Industrial Users.-Industrial and other large users are purchasers who put merchandise to business use as contrasted to distributors who resell goods in the same form in which these are purchased. In the case of a manufacturer who buys a generator to produce power in his plant, this is clearly a sale to an industrial user. When, however, a retailer buys incandescent bulbs, the problem is more complicated. If these bulbs are bought by a jeweler for lighting, the sale is to an industrial user; if bought by a department store for resale, the sale is to a retailer.

Four of the five industries dispose of important amounts of merchandise to industrial users. The lighting equipment industry does almost two-fifths (39.2%) of total business through this channel, while over

CENSUS OF BUSINESS: 1935

TABLE 2 - DISTRIBUTION OF SALES FROM MANUFACTURING PLANTS PRODUCING ELECTRICAL PRODUCTS: 1935

(all values are expressed in thousands of dollars)

Industry	Number of Plants	Total distributed sales for industry in 1935	Distribution of Manufacturers' Sales												Sales negotiated through agents and brokers, percent of total sales
			To own wholesale branches		To industrial users		To wholesalers and jobbers		To own retail stores		To retailers including chains		To household consumers		
			Amount	% of total	Amount	% of total	Amount	% of total	Amount	% of total	Amount	% of total	Amount	% of total	
Industry Total	2,326	$1,226,398	$259,153	21.1	$357,343	29.1	$467,795	38.1	$5,853	.5	$126,931	10.4	$9,323	.8	--
Electrical machinery, apparatus and supplies	1,349	721,626	203,832	28.2	254,973	35.4	204,419	28.3	4,953	.7	49,648	6.9	3,801	.5	6.1
Lighting equipment	489	82,746	2,164	2.6	32,380	39.2	28,037	33.9	588	.7	18,226	22.0	1,351	1.6	7.4
Radio apparatus and phonographs	184	175,033	6,470	3.7	38,354	21.9	104,528	59.7	--	--	23,602	13.5	2,079	1.2	4.2
Refrigerators and ice making apparatus	266	192,097	42,347	22.0	27,511	14.3	100,937	52.6	312	.2	19,593	10.2	1,397	.7	1.5
Washing machines	38	54,896	4,340	7.9	4,125	7.5	29,874	54.4	--	--	15,862	28.9	695	1.3	.5

Both Tables 2 and 3 are from a Census of Business report for 1935 entitled "Distribution of Manufacturers' Sales"

CENSUS OF BUSINESS: 1935

TABLE 3 - FREQUENCY OF USE OF CHANNELS OF DISTRIBUTION BY ELECTRICAL MANUFACTURING PLANTS

Industry	Number of plants reporting distribution of sales		Number of Plants Using Various Channels of Distribution																					
			To own wholesale branches				Direct to industrial and other large users				To wholesalers and jobbers				To own retail stores				To retailers including chains				Direct to household consumers			
			1935		1929		1935		1929		1935		1929		1935		1929		1935		1929		1935		1929	
	1935	1929	Total	Exc.	Total	Exc.	Total	Exc.	Total	Exc.	Total	Exc.	Total	Exc.	Total	Exc.	Total	Exc.	Total	Exc.	Total	Exc.	Total	Exc.	Total	Exc.
Industry Total	2,326	NA	166	76	NA	NA	1,140	473	NA	NA	1,279	444	NA	NA	29	11	NA	NA	788	254	NA	NA	201	30	NA	NA
Electrical machinery, apparatus and supplies	1,349	1,774	117	60	216	73	754	297	857	381	788	259	963	370	16	7	49	--	362	80	517	94	73	10	212	46
Lighting equipment	489	614	12	7	27	10	145	50	302	70	246	119	281	129	9	3	19	13	250	129	241	97	61	12	224	56
Radio apparatus and phonographs	184	NA	14	3	NA	NA	82	32	NA	NA	116	43	NA	NA	--	--	NA	NA	62	10	NA	NA	28	4	NA	NA
Refrigerators and ice making apparatus	266	NA	18	6	NA	NA	151	94	NA	NA	104	23	NA	NA	4	1	NA	NA	89	35	NA	NA	28	4	NA	NA
Washing machines	38	NA	5	--	NA	NA	8	--	NA	NA	25	--	NA	NA	--	--	NA	NA	25	--	NA	NA	11	--	NA	NA

NA means comparable information for 1929 not available. "Exc." shows the number of plants using the one indicated channel of distribution exclusively.

one-third (35.4%) of the volume of electrical machinery, apparatus and supplies plants goes to industrial users. For radio plants, the figure is over one-fifth (21.9%), and for refrigerator plants one-seventh (14.3%). In the case of washing machines alone do sales to industrial users become decidedly secondary (7.5%). Over one-half (754 of 1,349) of the electrical machinery, apparatus and equipment plants sell to industrial users and over one-fifth (297 of 1,349) sell exclusively in this manner. The number of plants in the other industries using this channel of distribution is also substantial.

Sales to Wholesalers.-Sales to wholesalers accounted for 38.1 percent of the distributed sales of the five selected industries and were the most important and most frequently used channel of distribution. In the case of the major electrical appliances, sales to wholesalers accounted for one-half to almost three-fifths (radio 59.7 percent, washing machines 54.4 percent, refrigerators 52.6 percent) of total sales. For electrical machinery, apparatus and supplies (28.3 percent of sales) and lighting equipment (33.9 percent of sales), wholesalers were also important primary outlets. Of the 2,326 plants in these five industries, over one-half (1,279) sold to wholesalers and almost one-fifth (444) sold exclusively to them, indicating clearly the important place held by the wholesaler in the electrical field.

Sales to Own Retail Stores.-Sales to retail stores owned by the plant are of very minor importance in the sale of electrical merchandise. Such retail outlets were owned by only 29 plants in the electrical industries although 11 of these distributed solely through their own stores. No stores were owned by radio or washing machine plants, and no one of the other three industries disposed of more than .7 of one percent of sales through owned retail stores. Only one-half of one percent of total sales for the selected industries went through this channel.

Sales to Retailers.-Sales to retailers, including chains, accounted for one-tenth (10.4%) of total sales for the electrical industries. About one-quarter of washing machine (28.9%) and lighting equipment (22.0%) sales were made to retailers. For electrical machinery, apparatus and supplies (6.9 percent of sales), radios (13.5 percent of sales) and refrigerators (10.2 percent of sales), sales from plant to retailer were important yet a secondary channel of distribution. Of the 2,326 plants in the selected industries, one-third (788) sold to retailers and approximately one-tenth (254) utilized this distributive channel exclusively. From the comparative data available between 1935 and 1929 for the electric machinery, apparatus and supply industry and the lighting equipment industry, sales to retailers would appear to have remained about constant.

Summary of Manufacturers' Distribution.-No one channel of primary distribution dominated the selected electrical industries. The broad classification of the electrical machinery, apparatus and supplies industry leaves much to be desired, although it clearly indicates a wide use of sales branches (28.2 percent of sales), sales to industrial users (35.4 percent of sales), and sales to wholesalers (28.3 percent of sales). In lighting equipment, sales to industrial users (39.2 percent of sales) and sales to wholesalers (33.9 percent of sales) are most important. In the major electrical appliance industries (radios, refrigerators, washing machines), sales to wholesalers dominate and account for from one-half to three-fifths of total sales.

Of the 2,326 plants, 1,288 used one channel of distribution to the exclusion of all others. Of these, 76 chose to sell only to own wholesale branches, 473 to industrial users, 444 to wholesalers, 11 to their own retail stores, 254 to retailers, and 30 to household consumers. When the 1929 and 1935 information is compared, no distinct trends are noticeable.

Sales to own wholesale branches and to wholesalers amounted to 59.2 percent of total sales or $726,948,000, a figure somewhat less than the total sales of wholesalers which amounted to $1,109,404,000 (see Table 4). These figures necessarily differ for several reasons, four of which are worthy of examination.

The value of electrical merchandise, in the first place, is given f.o.b. plant in Table 2. When the same goods appear in the sales of wholesalers, their value is increased by transportation charges and the wholesale margin (expenses and profit). The operating expenses of wholesale establishments are the only one of these three items which can be determined and, omitting agents and brokers, amounted to $139,512,000 (see Table 5). Secondly, some goods appear more than once in the wholesale figures when one wholesale establishment sells to another wholesaler. This duplication, excluding agents and brokers, amounted to $124,540,000 for the establishments which were able to allocate their sales to the various channels of distribution (see Table 25).

Sales through agents and commission houses, in addition, fall into the wholesale classification of "agents and brokers." In analyzing the distribution of manufacturers' sales in Table 2, sales by means of such middlemen were allocated to the purchaser, not the intermediary agent or commission house. Agents, brokers and commission houses, however, are real wholesale operators and appear in the Wholesale Census. To make the two sets of sales figures comparable, it is therefore necessary to deduct the sales of this group, which totalled $45,863,000, from the wholesale figures. When these two amounts are deducted from the total sales of electrical wholesalers, the net amount is $799,489,000 as compared with distributed sales of $726,948,000 for electrical manufacturing plants, a difference of $72,541,000. This difference should be increased by the value of electrical merchandise sold by manufacturing plants to non-electrical wholesalers (except agents and brokers) which amounted to $91,612,000 (at wholesale prices) as shown in Table 28.

This variation, in the third place, includes all electrical merchandise bought by electrical wholesalers from manufacturers not included in the five selected industries in Tables 3 and 4. Since the Census of Manufactures includes a plant only under one classification, that into which the largest portion of its output falls, this is an important consideration. Fourthly, electrical wholesalers sell quantities of goods which, from a manufacturing standpoint, are non-electrical. Wire and tape are illustrations.

When these factors are considered, the sales of manufacturing plants and of wholesalers in the electrical field are consistent and complementary. It is emphasized that no deduction or conclusion drawn from the figures herein presented can be accurate which attempts to measure the operating profit or gross margin of wholesalers. The Census Bureau definitely does not report nor request data on cost of goods sold nor net profit.

Summary of the Wholesale Electrical Trade

The wholesale electrical trade includes all wholesalers who did more than fifty percent of their 1935 business in electrical merchandise. Establishments which did some retailing were also included when the retail activities amounted to less than half of the total business transacted. In the case of multi-unit organizations, each selling establishment has been counted separately, although administrative offices of ownership groups and other non-selling units were not included. With these limitations, the wholesale electrical trade is summarized in Table 4.

During 1935, electrical wholesalers had 3,767 establishments with sales of $1,109,404,000. The total operating expenses of these establishments, including pay roll, were $142,879,000 or 12.9 percent of their net sales. An average of 40,796 persons was given full-time and part-time employment and received compensation amounting to $76,380,000. In addition, 1,592 proprietors or firm members of unincorporated concerns actively participated in the business of their houses, although their compensation has not been included in the pay roll nor are they counted as employees. These wholesalers had stocks on hand (at cost) on December 31, 1935, to the extent of $98,986,000.

TABLE 4.--SUMMARY OF THE WHOLESALE ELECTRICAL TRADE IN THE UNITED STATES: 1935

Number of establishments	3,767
Net sales	$1,109,404,000
Active proprietors	1,592
Total employees (full-time and part-time)	40,796
Total pay roll	$76,380,000
Total expenses (including pay roll)	$142,879,000
Stocks on hand, December 31, 1935	$98,986,000

Summary for the United States, by Types of Operation.--The 3,767 establishments in the electrical trade consisted of 2,438 full-service and limited-function wholesalers, 428 manufacturers' sales branches (with stocks), 263 manufacturers' sales offices (without stocks), and 638 agents and brokers.

The 2,438 full-service and limited-function wholesalers had sales of $576,542,000 and accounted for 52.0 percent of the sales of all electrical establishments. Within this major classification are found wholesale merchants, exporters, importers, drop shippers or desk jobbers, and mail-order wholesalers. The predominant type, however, was the wholesale merchant, accounting for 98.3 percent of the establishments and 96.9 percent of sales. As the wholesale merchant classification coincides with what the trade and the public call "wholesalers" or "jobbers," it is conclusive that, in the electrical trade, the broader census classification of full-service and limited-function wholesalers is substantially in accord with the trade term of "wholesaler" or "jobber." In the other groups, it is of interest to note that the 14 mail-order houses had costs of 29.5 percent of sales while wholesale merchants had costs equal to 17.4 percent of sales.

Manufacturers' sales branches (with stocks) refer to establishments maintained by manufacturers separate from their plants for the sale and delivery of their products. The 428 manufacturers' sales branches had sales of $349,819,000 or 31.5 percent of the total for all establishments. Their cost of doing business equalled 9.1 percent of net sales. Manufacturers' sales offices (without stocks) differ from manufacturers' sales branches mainly in the fact that, although some stock may be carried for inspection, they are not equipped to deliver merchandise to buyers but must have it shipped from the factory. This group consisted of 263 establishments with sales of $137,180,000 or 12.4 percent of total sales for all establishments, and with operating expenses of 6.1 percent of sales.

In the general classification of agents and brokers, manufacturers' agents dominate with 90.8 percent of the establishments and 91.3 percent of sales. The 579 manufacturers' agents had sales of $41,873,000 and operating expenses equal to 6.6 percent of sales. The 32 export agents, the 20 selling agents, the 5 import agents, the 1 commission agent and the "other" agent considered together account for only 9.2 percent of the establishments and 8.7 percent of the sales of the agents and brokers group. In the case of the electrical trade, therefore, the term "agents and brokers" is substantially identical with the usual trade designation of manufacturers' agent. As a result, the term "agents" is substituted for the broader classification of "agents and brokers" in the remainder of this study.

Further details about each of these types of operation is given in Table 5, which shows number of establishments, net sales, operating expenses, active proprietors, employees, pay roll, and stocks for each wholesale type which has been described. In addition, Table 5 also shows the types of operation handling full lines and specialty lines of merchandise.

Summary for the United States, by Lines of Merchandise.--Electrical merchandise falls into three major classifications and the electrical trade has been divided into corresponding groupings in Table 6. The major classifications are wiring supplies and construction materials, apparatus and equipment, and radios, refrigerators and other appliances. Wholesalers may specialize in any one of these three types of merchandise or handle all three. When a general line of electrical goods is carried and sales are not predominately limited to one of the three special lines, wholesalers are classified as full-line. Electrical wholesalers thus fall into four groups: full-line, and specialty line in each of the three major merchandise classifications.

CENSUS OF BUSINESS: 1935

TABLE 5 - SUMMARY OF THE WHOLESALE ELECTRICAL TRADE BY DETAILED TYPES OF OPERATION, NUMBER OF ESTABLISHMENTS, NET SALES, OPERATING EXPENSES, PROPRIETORS, EMPLOYEES, PAY ROLL AND STOCKS

(all values are expressed in thousands of dollars)

Type of Operation	Number of establishments	Net sales	Operating expenses		Active proprietors	Employees (full-time and part-time). Avg. for year	Pay Roll % to Sales	Stocks on hand, end of year		
			Total	% to Sales				Total	% to Sales	Held on consignment
Total, all typee	3,767	$1,109,404	$142,879	12.9	1,592	40,796	6.9	$98,986	8.9	$20,881
Full-service and limited-function wholesalers	2,438	576,542	99,460	17.2	1,051	30,088	9.1	75,424	13.1	18,699
Wholesale merchants	2,397	558,514	97,410	17.4	1,031	29,658	9.2	74,171	13.3	18,678
Exporters	11	14,341	1,334	9.3	--	197	3.9	732	5.1	--
Importers	14	2,050	337	16.5	6	119	7.5	273	13.3	20
Drop shippers or desk jobbers	2	x	x	8.6	x	x	6.0	x	12.8	x
Mail-order wholesalers	14	x	x	29.5	x	x	10.5	x	16.2	x
Manufacturers' sales branches (with stocks)	428	349,819	31,685	9.1	6	7,832	5.0	21,800	6.2	779
Manufacturers' sales offices (without stocks)	263	137,180	8,367	6.1	1	1,655	3.2	--	--	--
Agents and brokers	638	45,863	3,367	7.3	534	1,221	4.0	1,762	3.8	1,403
Export agents	32	2,547	310	12.2	21	76	6.1	1	--	1
Manufacturers' agents	579	41,873	2,784	6.6	495	1,020	3.6	1,682	4.0	1,362
Selling agents	20	1,261	239	18.9	14	104	12.0	65	5.2	31
Commiseion merchants	1									
Import agents	5	182	34	18.7	4	21	12.6	14	8.1	9
Other agents	1									
Total, all typee	3,767	1,109,404	142,879	12.9	1,592	40,796	6.9	98,986	8.9	20,881
Full-line										
Full-service and limited-function wholesalers - Wholeeale merchante	419	184,233	26,933	14.5	39	8,405	8.0	26,669	14.4	7,188
Manufacturers' sales branches (wfth stocks)	28	62,476	5,053	8.1	--	1,282	4.8	2,513	4.0	--
Manufacturers' sales offices (without etocks)	24	31,344	2,105	6.7	--	351	3.0	--	--	--
Agents and brokers	7	1,269	68	5.3	6	25	2.9	24	1.8	17
Export agents	1	1,269	68	5.3	6	25	2.9	24	1.8	17
Manufacturers' agents	6									
Specialty line										
Full-service and limited-function wholesalers	2,019	392,309	72,527	18.5	1,012	21,683	9.6	48,755	12.4	11,511
Wholesale merchants	1,978	374,281	70,477	18.8	991	21,253	9.8	47,502	12.7	11,490
Exporters	11	14,341	1,334	9.3	--	197	3.9	732	5.1	--
Importere	14	2,050	337	16.5	6	119	7.5	273	13.3	20
Drop shippere or deek jobbers	2	x	x	8.6	x	x	6.0	x	12.8	x
Mail-order wholesalers	14	x	x	29.5	x	x	10.5	x	16.2	x
Manufacturere' sales branches (with etocks)	400	287,343	26,632	9.3	6	6,550	5.1	19,287	6.7	779
Manufacturers' salee offices (without etocks)	239	105,836	6,262	5.9	1	1,304	3.2	--	--	--
Agents and brokers	631	44,594	3,299	7.4	528	1,196	4.0	1,738	3.9	1,386
Export agents	31	2,449	306	12.5	20	73	6.2	1	--	1
Manufacturers' agents	573	40,702	2,720	6.7	490	998	3.6	1,658	4.1	1,345
Selling agents	20	1,261	239	18.9	14	104	12.0	65	5.1	31
Commission merchants	1									
Import agents	5	182	34	18.7	4	21	36.1	14	15.3	9
Other agente	1									

X - Figures withheld to avoid disclosure of individual operations.

Full-line wholesalers had 478 establishments with sales of $279,322,000 in 1935. Of these 478 establishments, 419 were full-service and limited-function wholesalers who accounted for 66.0 percent of the total business done by full-line establishments. Manufacturers' sales branches accounted for 28 houses and 22.4 psrcent of sales; manufacturers' sales offices numbered 24 with sales amounting to 11.2 psrcent of the total; and agents numbered 7 and did .4 of one percent of the business. In the full-line classification, therefore, full-service and limited-function wholesalers dominated clearly with almost seven-eighths of the establishments which accounted for about two-thirds of the sales.

In the case of wiring supplies and conetruction materials, there were 1,090 establishments with sales of $191,467,000. The 734 full-service and limited-function wholesalers had sales of $76,859,000 or 40.1 percent of the total. Manufacturers' sales branches numbered 60 with salee of $54,135,000 or 28.3 percent of the total. There were 63 manufacturers' salee offices with a business of $40,122,000 or 21.0 percent of sales for the group, while agents had 233 establishments with sales of $20,351,000 or 10.6 percent of total ealss. Full-service and limited-function wholesalers and manufacturere' sales branches thus largely control the wiring suppliss and construction materials classification.

The apparatus and equipment field had 667 establishments with sales of $296,253,000. Manufacturers' sales branches with 176 eetablishmente doing a business of $216,106,000, or 72.9 percent of the total, were the controlling factor. Manufacturers' sales offices with 144 places of business and sales of $49,849,000, or 16.8 percent of the total, were eecond in importance. Full-eervice and limited-function wholesalers accounted for 199 establishments with salee of $20,931,000 or 7.1 percent of sales for the group, while agents numbered 148 with a businees of $9,367,000 or 3.2 percent of total eales.

The appliance field included 1,532 houses doing a total bueiness of $342,362,000. The 1,086 full-service and limited-function wholesalers accounted for 86.0 percent of the total with sales of $294,519,000. Manufacturers' sales branches numbered 164 with sales of $17,102,000 or 5.0 percent of the total, while 32 manufacturers' sales offices accounted for 4.6 percent of the total with sales of $15,865,000. Agents had 250 establishments and a businees of $14,876,000 or 4.3 percent of total sales. The appliance fisld is thus dominated by full-service and limited-function wholesalere with about two-thirds of the eetabliehments doing a little over four-fifths of the total businese.

Examining the electrical trade as a whole, it is found that full-service and limited-function wholesalers accounted for 52.0 percent of sales. Thie general etatement, however, is somewhat misleading because thie group wae decisively the dominant type in the full-line (66.0 percent of sales) and appliance (86.0 percent of sales) classificatione, while it wae the most important type in wiring supplies and construction materiale with 40.3 percent of the total business. Manufacturers' ealee branches, on the other hand, were secondary factors in the full-line, wiring supplies and construction materiale, and appliance fields, although they were the outstanding type in apparatus and equipment, in which field they accounted for nearly three-quarters (73.0%) of total sales. Manufacturers' sales offices ranked third in importance in the full-lins, wiring supplies and appliance classifications and second in apparatus and equipment. Only in the sub-claeeification, "other electrical appliances and specialties," do sales officee become of first-clase importance (29.4 percent of sales). Agente are a minor factor in the electrical trade, accounting for leee than one-twentieth of the businees in sll except the wiring supplies and construction materials field where they did about one-tenth (10.6%) of the business.

The analyeis thus ehows that the full-line elsctrical trade and the appliance businese are characteristically handled by full-service and limited-function wholesalers, while the apparatus and equipment field represents mainly manufacturers' sales branchee. In ths caee of wiring supplies and construction materials, the dominance of no type is clear. Full-service and limited-function wholesalers do two-fifthe of the business while manufacturers' sales branches and officee together do about ons-half. As it is impossible to segregate the data for each of these four merchandise classifications in all of the tables which follow, these differences should be kept in mind.

Geographical Location of the Electrical Trade

The Census Bureau hae listed electrical establiehments in the cities or other political units in which their places of bueinese are found. If an establishment is located in Chicago and sells merchandise to buyers in every State, its eales are credited entirely to Chicago. To allocate the sales of every wholesaler to the territory in which the buyer resides would have required the detailed analysis of the books of every wholesale eetabliehment. This was impossible; therefore the total sales of each wholesaler have necessarily been credited to that area in which hie place of business is located.

Turning to Table 7, the wholesale trade of the country is pictured upon a State and geographic division basis. In this table, no total has been given for all types of operation because of the known duplication, i. e., eales from one wholesaler to another. Under "net sales" for each type of operation in Table 7, there is a column "percent sold to other wholesalers." Turning to Table 25, it ie found that the percentages listed in thie column have not been calculated for each establiehment appearing in Table 7 and 8 because some of these were unable to supply the necessary information. The sample available for analysis in Table 25 repreeente eubetantially, however, nine-tenthe of total sales. For the country, sales of full-service and limited-function wholesalers amounted to $576,542,000 but, under the heading "percent sold to other wholeealers," the figure 13.5 percent appears. This meane that 13.5 percent or $77,833,000 of the total sales of full-service and limited-function wholesalers went to other wholeealers and should be deleted from total salee in determining the amount of electrical merchandise passing through wholesale channele.

Although electrical wholesalers appear in every one of the 48 States and the District of Columbia, the electrical trade is highly concentrated. The 11 Statee representing the Middle Atlantic, East North

Central and Pacific divisions of the country account for 67.1 percent or two-thirds of the total business for full-service and limited-function wholesalers, while a similar total for manufacturers' sales branches is 70.6 percent. Not only are the sales concentrated in certain areas of the country but they are also centered in the large cities. In Table 8, for example, it is shown that the leading 25 wholesale centers accounted for two-thirds (66.1%) of the total business for full-service and limited-function wholesalers, while for manufacturers' sales branches the figure was 74.5 percent and, although slightly lower (63.7%) for manufacturers' sales offices, it reached a high of 92.6 percent for agents.

TABLE 6.--WHOLESALE ELECTRICAL TRADE BY LINES OF MERCHANDISE AND TYPES OF OPERATION

(all values are expressed in thousands of dollars)

Line of merchandise 1/ and type of operation	Number of establishments	Net sales	Operating expenses		Pay Roll			Stocks on hand Dec.31		
					Total			Total		
			Amount	% to net sales	Amount	% to net sales	Part-time	Amount	% to net sales	Held on consignment
A - Full-line	478	$279,322	$34,159	12.2	$18,753	6.7	$94	$29,206	10.5	$7,205
Full-service and limited-function wholesalers	419	184,233	26,933	14.6	14,787	8.0	90	26,669	14.5	7,188
Manufacturers' sales branches	28	62,476	5,053	8.1	2,984	4.8	--	2,513	4.0	--
Manufacturers' sales offices	24	31,344	2,105	6.7	944	3.0	--	--	--	--
Agents	7	1,269	68	5.4	38	3.0	4	24	1.9	17
B - Apparatus and Equipment	667	296,253	25,164	8.5	15,390	5.2	139	15,452	5.2	301
Full-service and limited-function wholesalers	199	20,931	4,415	21.1	2,643	12.6	48	3,041	14.5	57
Manufacturers' sales branches	176	216,106	16,577	7.7	10,275	4.8	58	12,073	5.6	9
Manufacturers' sales offices	144	49,849	3,456	6.9	2,055	4.1	24	--	--	--
Agents	148	9,367	716	7.6	417	4.5	9	338	3.6	235
C - Wiring Supplies and Construction Materials	1,090	191,467	23,254	12.1	12,471	6.5	242	19,233	10.0	1,081
Full-service and limited-function wholesalers	734	76,859	14,455	18.8	8,352	10.9	216	13,053	17.0	9
Manufacturers' sales branches	60	54,135	5,673	10.5	2,348	4.3	7	5,166	9.5	188
Manufacturers' sales offices	63	40,122	1,822	4.5	1,049	2.6	1	--	--	--
Agents	233	20,351	1,304	6.4	722	3.5	18	1,014	5.0	884
D - Radios, Refrigerators and Appliances	1,532	342,362	60,402	17.6	29,766	8.7	367	35,095	10.3	10,716
Full-service and limited-function wholesalers	1,086	294,519	53,657	18.2	26,713	9.1	217	32,661	11.1	9,867
Manufacturers' sales branches	164	17,102	4,482	26.2	2,069	12.1	57	2,048	12.0	582
Manufacturers' sales offices	32	15,865	984	6.2	329	2.1	67	--	--	--
Agents	250	14,876	1,279	8.6	655	4.4	26	386	2.6	267

1/ The full-line and specialty classifications shown here are not interchangeable with commodity classifications, as most wholesalers sell more than the lines in which they specialize. For commodity sales see Page 41.

An examination of the areas which electrical wholesalers serve is shown in Table 29. When these marketing radius figures are considered along with the concentration of the electrical trade, it is seen that a manufacturer may determine how comprehensive distribution can be obtained for his products by selling in a small selectsd number of cities and states. The figures for the electrical trade, naturally, are more valuable when analyzed according to specific lines of merchandise. While Tables 7 and 8 allocate the electrical trade by various types of wholesalers, Table 9 presents figures applying to full-service and limited-function wholesalers for each major kind of electrical merchandise. Since one major outlet is the full-line electrical wholesaler, Table 9 is divided into four parts so that full-line establishments can be segregated from those specializing in one kind of merchandise. Thess divisions are full-line, wiring supplies and construction materials, apparatus and equipment, and the major elsctrical appliances. In subdividing the electrical industry into these merchandise classification groups, it has besn found necessary to present the information for geographic divisions to avoid disclosure.

The detailed information given in these three tables (Tables 7, 8 and 9) is basic data which can be put to excellent use in building sales potentials, sales quotas, and also in determining the desirability of expanding a sales territory. For the convenience of the user, the rank in population of each city and area as well as its rank in electrical sales has been listed. These figures are of significant value in delineating and comparing market areas.

CENSUS OF BUSINESS: 1935

TABLE 7 - ELECTRICAL TRADE BY GEOGRAPHIC DIVISIONS AND STATES: 1935

(all values are expressed in thousands of dollars)

State	Full-service and limited-function wholesalers						Manufacturers' sales branches			Manufacturers' sales offices			Agents		
	Number	Net sales			Rank in		Number	Net sales		Number	Net sales		Number	Net sales	
		Amount	% of total	% sold to other wholesalers	Net sales	Population in 1930		Amount	% sold to other wholesalers		Amount	% sold to other wholesalers		Amount	% sold to other wholesalers
United States	2,438	$576,542	100.0	13.5			428	$349,819	11.0	263	$137,180	13.4	638	$45,863	32.0
New England	195	x	x	1.4	6	8	28	x	11.4	9	x	1.4	38	x	33.4
Connecticut	41	6,402	1.1	.3	23	29	3	x	--	2	x	2.7	2	x	--
Maine	14	1,628	.3	.1	37	35	--	--	--	--	--	--	--	--	--
Massachusetts	120	22,662	3.9	1.9	6	8	25	23,303	12.5	7	2,012	x	35	2,346	34.5
New Hampshire	5	285	.1	2.1	45	42	--	--	--	--	--	--	--	--	--
Rhode Island	12	2,731	.4	.1	34	37	--	--	--	--	--	--	1	x	--
Vermont	3	x	x	--	44	46	--	--	--	--	--	--	--	--	--
Middle Atlantic	729	191,295	33.2	24.6	1	1	88	110,516	9.2	77	x	15.2	189	x	21.5
New Jersey	67	15,559	2.7	11.7	10	9	4	5,306	14.8	1	x	3.5	2	x	70.6
New York	490	97,227	16.9	9.4	1	1	53	58,730	6.9	43	35,547	17.7	141	12,439	21.6
Pennsylvania	172	78,509	13.6	44.6	2	2	31	46,480	11.4	33	11,155	11.1	46	3,163	19.5
East North Central	535	129,400	22.4	15.0	2	2	111	100,929	11.1	80	x	9.7	145	11,913	31.8
Illinois	174	38,157	6.6	7.4	5	3	45	51,410	12.8	18	6,176	17.3	59	6,415	37.7
Indiana	50	10,585	1.8	.3	12	11	8	1,555	.7	2	x	27.5	15	1,251	15.1
Michigan	97	22,014	3.8	.7	8	7	19	24,506	8.1	16	9,144	10.5	16	1,823	24.4
Ohio	166	49,265	8.6	33.6	4	4	30	19,726	12.1	40	30,327	6.0	43	1,990	37.1
Wisconsin	48	9,389	1.6	.2	13	13	9	3,732	7.2	4	2,131	20.3	12	434	--
West North Central	209	x	x	2.8	5	4	43	30,194	14.0	26	x	7.2	67	3,626	47.6
Iowa	36	6,750	1.2	.4	20	19	3	x	7.2	5	999	6.6	2	x	--
Kansas	12	3,872	.6	--	29	24	1	x	x	1	x	x	--	--	--
Minnesota	56	11,328	2.0	5.9	11	18	9	5,647	14.4	8	1,174	7.0	20	650	29.3
Missouri	76	22,433	3.9	2.5	7	10	25	17,687	15.1	11	922	8.6	37	2,771	52.0
Nebraska	21	4,907	.8	2.5	27	32	4	5,590	11.6	1	x	--	6	180	50.6
North Dakota	3	x	x	.8	43	38	1	x	x	--	--	--	1	x	x
South Dakota	5	583	.1	--	42	36	--	--	--	--	--	--	1	x	x
South Atlantic	226	52,333	9.1	2.4	4	3	44	24,227	10.7	25	15,518	20.5	32	2,929	31.3
Delaware	5	678	.1	--	41	47	--	--	--	--	--	--	--	--	--
District of Columbia	17	8,658	1.5	.1	15	41	4	7,018	2.9	3	x	10.8	3	x	--
Florida	44	6,040	1.1	.3	24	31	6	663	2.6	3	x	37.3	4	182	--
Georgia	25	7,356	1.3	3.7	18	14	14	10,844	13.9	8	1,776	35.6	17	1,967	7.7
Maryland	36	7,409	1.3	1.3	17	28	4	580	12.2	6	5,552	25.7	3	x	41.4
North Carolina	31	7,153	1.2	2.4	19	12	3	x	21.1	2	x	--	3	x	--
South Carolina	11	1,781	.3	1.4	35	26	1	x	x	--	--	--	1	x	--
Virginia	32	8,233	1.4	4.3	16	20	8	142	88.6	2	x	--	--	--	--
West Virginia	25	5,025	.9	4.8	26	27	4	3,006	9.1	1	x	--	1	x	--
East South Central	65	x	x	1.7	8	6	8	1,175	16.0	12	x	17.1	7	x	23.3
Alabama	11	2,977	.5	--	33	15	2	x	--	5	2,328	22.3	4	120	64.5
Kentucky	20	3,262	.6	3.8	32	17	3	x	1.0	2	x	29.2	2	x	--
Mississippi	3	x	x	--	47	23	--	--	--	--	--	--	--	--	--
Tennessee	31	6,672	1.2	1.5	21	16	5	x	57.7	5	4,403	10.3	1	x	x
West South Central	118	28,356	4.9	1.1	7	5	29	12,010	14.3	12	x	9.1	22	x	41.5
Arkansas	8	1,143	.2	4.3	39	25	3	95	98.7	--	--	--	1	x	--
Louisiana	19	5,717	1.0	.3	25	22	4	1,646	24.4	4	1,110	14.3	7	319	30.7
Oklahoma	23	4,814	.8	2.3	28	21	5	1,109	23.1	2	x	x	2	x	--
Texas	68	16,682	2.9	.6	9	5	17	9,160	10.6	6	627	4.7	12	1,018	50.7
Mountain	58	x	x	1.4	9	9	15	10,481	6.9	5	960	24.0	13	956	63.0
Arizona	9	1,415	.2	.2	38	44	3	x	2.0	1	x	40.8	--	--	--
Colorado	24	3,546	.6	2.3	31	33	6	6,808	3.9	2	x	22.1	8	679	89.0
Idaho	5	906	.1	--	40	43	1	x	x	--	--	--	--	--	--
Montana	6	1,745	.3	--	36	39	2	x	20.3	--	--	--	--	--	--
Nevada	1	x	x	--	x	49	--	--	--	--	--	--	--	--	--
New Mexico	--	--	--	--	48	45	1	x	x	--	--	--	--	--	--
Utah	13	3,844	.7	2.2	30	40	2	x	14.9	2	x	x	5	277	22.7
Wyoming	--	--	--	--	49	48	--	--	--	--	--	--	--	--	--
Pacific	303	66,019	11.5	10.3	3	7	62	34,651	13.9	17	3,099	24.2	125	6,495	45.0
California	223	50,560	8.8	13.2	3	6	44	24,662	15.5	13	2,537	30.3	93	5,403	44.7
Oregon	27	6,482	1.1	14.7	22	34	9	5,687	7.5	2	x	x	8	340	44.4
Washington	53	8,977	1.6	1.9	14	30	9	4,302	13.7	2	x	x	24	752	47.2

X - Withheld to avoid disclosure of individual operations.

TABLE 8.--LEADING 25 WHOLESALE ELECTRICAL TRADE CENTERS: 1935

(all values are expressed in thousands of dollars)

City	Rank in Population 1930	Full-service and limited-function wholesalers					Manufacturers' sales branches					Manufacturers' sales offices					Agents				
		No.	Net sales				No.	Net sales				No.	Net sales				No.	Net sales			
			Amount	% to U. S. total	% to other wholesalers	Rank		Amount	% to U. S. total	% to other wholesalers	Rank		Amount	% to U. S. total	% to other wholesalers	Rank		Amount	% to U. S. total	% to other wholesalers	Rank
Total, 25 Cities		1,322	$380,963	66.1	NA		308	$260,380	74.4	NA		179	$87,423	63.7	NA		549	$42,461	92.6	NA	
Atlanta	23	19	6,951	1.2	NA	16	12	10,834	3.1	NA	9	8	1,776	1.3	NA	14	17	1,967	4.3	NA	6
Baltimore	8	32	7,038	1.2	1.4	15	4	580	.2	12.2	25	5	x	x	25.7	3	3	x	x	NA	25
Boston	9	51	15,986	2.8	1.3	7	17	15,759	4.5	18.4	6	7	2,012	1.5	NA	12	32	x	x	35.2	5
Buffalo	14	21	5,034	.9	4.1	21	7	7,343	2.1	9.5	17	5	760	.6	NA	17	3	x	x	15.9	19
Chicago	2	138	34,937	6.1	8.0	3	43	x	x	12.8	1	17	x	x	4.7	4	57	x	x	37.7	2
Cincinnati	16	30	6,798	1.2	NA	17	12	5,340	1.5	NA	17	10	4,350	3.2	NA	6	4	154	.3	NA	22
Cleveland	6	43	10,856	1.9	6.4	11	13	14,183	4.1	12.3	7	14	4,622	3.4	5.5	5	26	1,591	3.5	36.7	10
Dallas	24	21	6,659	1.2	NA	19	7	4,588	1.3	NA	19	3	x	x	NA	22	9	873	1.9	NA	13
Denver	22	22	3,197	.6	NA	25	5	6,785	1.8	NA	13	2	512	.3	NA	19	8	679	1.5	NA	16
Detroit	4	45	16,299	2.8	.8	6	19	24,506	7.0	8.1	4	12	8,255	6.0	10.5	8	13	x	x	25.0	8
Houston	21	17	4,011	.7	NA	24	4	3,139	.9	NA	22	--	--	--	--	25	3	145	.3	NA	23
Indianapolis	20	22	6,796	1.2	NA	18	2	x	x	NA	24	2	x	x	NA	9	9	800	1.7	NA	14
Kansas City	18	26	8,041	1.4	NA	13	12	6,484	1.9	NA	14	3	x	x	NA	20	11	1,012	2.2	NA	12
Los Angeles	5	94	22,526	3.9	4.7	4	19	8,494	2.4	17.9	11	7	1,810	1.3	31.1	13	49	2,699	5.9	40.7	3
Milwaukee	13	31	7,961	1.4	.3	14	8	x	x	7.2	21	4	x	x	20.3	11	10	x	x	NA	18
Minneapolis and St. Paul	10	46	10,209	1.8	NA	12	9	5,647	1.6	NA	15	6	805	.6	NA	16	20	650	1.4	NA	17
Newark	17	27	11,271	1.9	NA	10	4	5,306	1.5	NA	18	1	x	x	NA	10	2	x	x	NA	24
New Orleans	15	15	4,695	.8	NA	22	3	1,625	.5	NA	23	4	x	x	NA	15	7	319	.7	NA	20
New York	1	371	78,100	13.5	10.5	1	36	5,841	1.7	6.2	2	27	30,861	22.5	19.0	1	132	11,810	25.8	21.2	1
Omaha	25	17	4,149	.7	NA	23	4	5,590	1.6	NA	16	1	x	x	NA	24	6	x	x	NA	21
Philadelphia	3	75	59,442	10.3	58.5	2	18	28,891	8.2	11.3	3	14	6,066	4.4	12.0	2	24	1,821	4.0	14.8	7
Pittsburgh	11	26	11,329	1.9	1.5	9	12	x	x	11.6	5	12	3,513	2.6	3.5	7	17	1,163	2.5	32.8	11
St. Louis	7	39	13,578	2.3	2.8	8	13	11,203	3.2	14.7	8	8	x	x	NA	21	25	1,751	3.8	53.6	9
San Francisco	12	61	18,896	3.3	22.9	5	17	9,941	2.9	20.2	10	6	727	.5	NA	18	40	2,677	5.8	49.5	4
Seattle	19	33	6,204	1.1	NA	20	8	4,257	1.2	NA	20	1	x	x	NA	23	22	x	x	NA	15

NA - not available
X - Figures withheld to avoid disclosure of individual operations

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TABLE 9.-- MERCHANDISE LINES FOR GEOGRAPHIC DIVISIONS

FULL-SERVICE AND LIMITED-FUNCTION WHOLESALERS

(all values are expressed in thousands of dollars)

Division and Lines of Merchandise	Number of establishments	Net sales	Operating expenses (including pay roll)	Active proprietors and firm members	Employees (full-time and part-time). Avg. for year	Total pay roll	Stocks on hand, end of year
United States Total	2,438	$576,542	$99,460	1,051	30,088	$52,495	$75,424
Electrical merchandise (full-line)	419	184,233	26,933	39	8,405	14,787	26,669
Apparatus and equipment	199	20,931	4,415	104	1,719	2,643	3,041
Wiring supplies and construction materials	734	76,859	14,455	354	5,331	8,352	13,053
Radios, refrigerators and appliances	1,086	294,519	53,657	554	14,633	26,713	32,661
Radios and equipment	554	123,708	20,895	329	5,418	9,716	9,193
Refrigerators and equipment	309	146,109	27,690	96	7,489	14,206	20,367
Other appliances and specialties	223	24,702	5,072	129	1,726	2,791	3,101
New England	195	x	x	x	x	x	x
Electrical merchandise (full-line)	41	14,741	2,194	--	731	1,163	2,224
Apparatus and equipment	9	x	x	x	x	x	x
Wiring supplies and construction materials	76	5,938	1,215	40	428	657	846
Radios, refrigerators and appliances	69	12,784	2,510	30	765	1,293	1,102
Radios and equipment	40	4,629	805	19	282	459	462
Refrigerators and equipment	18	6,343	1,368	8	364	652	432
Other appliances and specialties	11	1,812	337	3	119	182	208
Middle Atlantic	729	191,295	33,813	341	9,225	17,234	19,563
Electrical merchandise (full-line)	86	41,812	6,259	18	1,913	3,449	5,553
Apparatus and equipment	69	11,471	1,773	40	581	1,003	1,457
Wiring supplies and construction materials	297	27,689	5,553	139	1,996	3,145	5,198
Radios, refrigerators and appliances	277	110,323	20,226	144	4,735	9,637	7,355
Radios and equipment	150	65,727	10,814	81	2,061	4,439	2,772
Refrigerators and equipment	57	37,970	7,821	18	2,104	4,284	3,380
Other appliances and specialties	70	6,626	1,591	45	570	914	1,203
East North Central	535	129,400	23,100	220	7,002	12,158	22,411
Electrical merchandise (full-line)	89	40,440	5,864	4	1,794	3,274	5,647
Apparatus and equipment	53	5,000	1,335	23	603	862	668
Wiring supplies and construction materials	130	18,615	3,390	60	1,255	1,996	2,687
Radios, refrigerators and appliances	263	65,345	12,511	133	3,350	6,026	13,409
Radios and equipment	131	17,611	3,058	74	960	1,495	2,072
Refrigerators and equipment	68	41,136	7,964	16	1,884	3,763	10,606
Other appliances and specialties	64	6,598	1,489	43	506	768	731
West North Central	209	x	x	x	x	x	x
Electrical merchandise (full-line)	47	21,039	3,168	3	980	1,771	2,869
Apparatus and equipment	20	x	x	x	x	x	x
Wiring supplies and construction materials	36	3,880	765	17	273	410	624
Radios, refrigerators and appliances	106	24,485	4,757	55	1,368	2,408	2,664
Radios and equipment	49	7,239	1,451	37	459	698	909
Refrigerators and equipment	38	14,454	2,712	12	736	1,418	1,472
Other appliances and specialties	19	2,792	594	6	173	292	283
South Atlantic	226	52,333	8,264	76	2,825	4,769	6,737
Electrical merchandise (full-line)	55	20,874	2,829	6	1,003	1,673	3,062
Apparatus and equipment	12	871	255	4	108	141	142
Wiring supplies and construction materials	53	6,638	1,034	14	362	614	1,119
Radios, refrigerators and appliances	106	23,950	4,146	52	1,352	2,341	2,414
Radios and equipment	61	9,912	1,825	39	661	1,064	1,168
Refrigerators and equipment	38	13,427	2,222	9	654	1,211	1,202
Other appliances and specialties	7	611	99	4	37	66	44
East South Central	65	x	x	x	x	x	x
Electrical merchandise (full-line)	15	4,499	525	1	139	248	678
Apparatus and equipment	4	x	x	x	x	x	x
Wiring supplies and construction materials	15	1,717	254	5	100	149	221
Radios, refrigerators and appliances	31	6,340	1,177	18	381	628	651
Radios and equipment	16	2,432	405	8	128	212	238
Refrigerators and equipment	12	3,509	710	8	231	380	362
Other appliances and specialties	3	399	62	2	22	36	51

(continued)

X - Figures withheld to avoid disclosure of individual operations.

TABLE 9.-- MERCHANDISE LINES FOR GEOGRAPHIC DIVISIONS

FULL-SERVICE AND LIMITED-FUNCTION WHOLESALERS

(all values are expressed in thousands of dollars)

Division and Lines of Merchandise	Number of establishments	Net sales	Operating expenses (including pay roll)	Active proprietors and firm members	Employees (full-time and part-time). Avg. for year	Total pay roll	Stocks on hand, end of year
West South Central	118	$28,356	$4,620	35	1,465	$2,497	$3,937
Electrical merchandise (full-line)	30	9,014	1,375	—	418	735	1,896
Apparatus and equipment	7	200	52	3	23	28	14
Wiring supplies and construction materials	24	3,800	572	11	223	389	605
Radios, refrigerators and appliances	57	15,942	2,621	21	819	1,375	1,422
Radios and equipment	25	3,706	718	11	214	327	390
Refrigerators and equipment	25	10,298	1,614	9	493	853	856
Other appliances and specialties	7	1,938	289	1	112	195	176
Mountain	58	x	x	x	x	x	x
Electrical merchandise (full-line)	13	3,702	762	2	218	403	820
Apparatus and equipment	1	x	x	x	x	x	x
Wiring supplies and construction materials	17	778	174	10	74	106	127
Radios, refrigerators and appliances	27	5,182	993	8	311	494	652
Radios and equipment	9	1,057	219	7	90	113	117
Refrigerators and equipment	14	3,706	703	—	201	334	470
Other appliances and specialties	4	419	71	1	20	47	65
Pacific	303	66,019	10,509	171	3,510	5,709	8,812
Electrical merchandise (full-line)	45	26,112	3,957	5	1,209	2,071	3,920
Apparatus and equipment	24	1,335	338	15	129	211	274
Wiring supplies and construction materials	86	8,404	1,498	58	620	916	1,626
Radios, refrigerators and appliances	150	30,168	4,716	93	1,552	2,511	2,992
Radios and equipment	73	11,395	1,600	53	565	909	1,065
Refrigerators and equipment	39	15,266	2,576	16	822	1,311	1,587
Other appliances	38	3,507	540	24	167	291	340

X - Figures withheld to avoid disclosure of individual operations.

Operating Expenses

Operating expenses cover total pay roll and all other costs incurred in the operation of the business, such as administrative, selling, delivery, warehouse, occupancy and other expenses. The amount does not include charges to capital accounts, cost of goods sold, income taxes, etc. In the case of unincorporated businesses, no compensation is included for the services of proprietors and firm members. An examination of Table 5 shows that the operating expenses for the 3,767 electrical wholesalers amounted to $142,879,000 or 12.9 percent of net sales. The ratio was 17.2 percent for full-service and limited-function wholesalers, 9.1 percent for manufacturers' sales branches, 6.1 percent for manufacturers' sales offices and 7.3 percent for agents and brokers. The variation in cost is largely due to differences in services offered, lines of merchandise handled, and size of annual business done by the average establishment.

Full-service and limited-function wholesalers in the electrical trade operate mainly in the wiring supplies and construction materials, and the electrical appliance fields, while manufacturers' sales branches and sales offices dominate the apparatus and equipment business. Manufacturers' sales offices and agents handle little or no stock for delivery and do not perform certain other functions common to branches and full-service wholesalers. Manufacturers' sales branches offer delivery and credit facilities somewhat comparable to those given by full-service wholesalers but they specialize in a different field (apparatus and equipment) and have a very large annual volume to the individual establishment (about $800,000 each). Likewise, these branches sell a considerable amount of merchandise which is shipped directly from the plant and do not fill all orders entirely from stocks on hand. These differences account for the major portion of the variation in expense ratios. In Table 5, in addition, the operating expenses of each detailed type of wholesaler in the electrical trade are shown.

Of particular interest are full-service and limited-function wholesalers, hence, the operating expenses of this group are shown by geographic divisions in Table 10. For the country as a whole the expense ratio of this group was 17.3 percent of which 9.1 percent was composed of pay roll. Turning to the geographic divisions, it is found that expenses were highest in New England, where they amounted to 18.0 percent and were lowest in the South Atlantic (15.8%), East South Central (15.8%) and the Pacific (15.9%) areas where they were slightly under 16 percent. Total pay roll reached a peak of 9.5 percent of sales in New England, the East North Central and the West North Central divisions, while it dropped to 8.4 percent in the East South Central. Although the South Atlantic region had as low total expenses (15.8%) as any other area, it is interesting to note that its total pay roll was exactly the same as the national average (9.1%). On the whole, however, the areas with the lower total expenses have the smaller pay roll ratios. The differences between the geographic divisions reflect variation in business practice and also mark the individual characteristics of specific areas.

Stocks on hand represent the inventory value (at cost) of all merchandise on hand for resale at the end of the year 1935, including merchandise held on consignment. As stocks were valued at cost, they are not directly comparable with the sales figures which represent merchandise at cost plus the wholesale margin. Since, however, the cost of doing business does not differ greatly from one section of the country to the other, the ratios of stocks on hand to total sales are significant. With stocks at cost amounting to 13.1 percent of sales for the country as a whole, the lowest stocks were found to be held in the Middle Atlantic division (10.2%), while the largest stocks were held in the East North Central division where they amounted to 17.3 percent of net sales. The ratio of stocks on hand appears to reflect more the requirements of the particular areas than the efficiency or lack of efficiency of establishments. In the Middle Atlantic area, stocks are lowest although the expense ratio is relatively high. Likewise, total expenses in the Pacific division are low although this area shows the largest stocks.

TABLE 10.--OPERATING EXPENSES OF FULL-SERVICE AND LIMITED-FUNCTION WHOLESALERS BY GEOGRAPHIC DIVISIONS

(all values are expressed in thousands of dollars)

Geographic division	Number of establishments	Net sales	Total expenses (percent to net sales)	Total pay roll (percent to net sales)	Total stocks on hand (at cost) December 31, 1935 (percent to net sales)
United States Total	2,438	$576,542	17.3	9.1	13.1
New England	195	34,008	18.0	9.5	12.7
Middle Atlantic	729	191,295	17.7	9.0	10.2
East North Central	535	129,400	17.9	9.5	17.3
West North Central	209	50,372	17.9	9.5	12.6
South Atlantic	226	52,333	15.8	9.1	12.9
East South Central	65	13,026	15.8	8.4	12.9
West South Central	118	28,356	16.3	8.8	13.9
Mountain	58	11,733	16.7	8.7	13.7
Pacific	303	66,019	15.9	8.6	13.3

Frequency Distribution of Operating Expenses.-For wholesale merchants, Table 5 shows that operating expenses were 17.4 percent of sales and that, for those wholesale merchants carrying a full-line of electrical merchandise, the ratio was 14.5 percent. A sample of 386 full-line wholesale merchants (see Page 46 for detailed description) was selected for special tabulation. In Table 11 these houses are classified according to their operating expense ratios. For the special sample as a whole, the expense ratio was 14.4 percent, an amount slightly under that for the total number of establishments similarly classed for the country. An examination of Table 11 indicates that the most common ratios were those between 12 and 20 percent, with a tapering off of establishments and their importance both above and below these figures. The highest concentration appeared in the group with expenses between 12 and 14 percent of sales where 71 establishments doing one-fifth (20.7%) of the total business were found. When the three groups with expenses from 12 to 18 percent are totaled, 171 establishments are found, and these houses did one-half (51.7%) of the total business, thus indicating that the average cost of 14.4 percent of sales was approached by the bulk of electrical wholesale merchants. This shows that, under most circumstances, a well run wholesale merchant will not have costs exceeding 18 percent and that his business is unusually well run if his costs approach 12 percent. Due allowance should undoubtedly be made for differences caused by variations in territory as already indicated in Table 10. It is apparent, however, that the average cost ratio for all full-line wholesale merchants (14.5%) represents substantially the greatest frequency as well as the arithmetic average of operating expenses.

Operating Expenses in Detail

Wholesale merchants with annual sales in excess of $50,000 were asked to analyze their accounts and report their administrative, selling, delivery, warehouse, occupancy, and other expenses separately. It was found, however, that the accounting methods in vogue in most of the houses with sales of less than $100,000 did not lend themselves to this type of analysis. This study is limited, therefore, to those houses with annual sales of $100,000 or more which were able to furnish adequate data. This breakdown of operating expenses into detailed functional divisions appears in Table 12. As cost figures are more significant when analyzed for specific lines of merchandise, the information has been presented for full-line wholesale merchants and the three specialty lines separately.

TABLE 11.--FREQUENCY DISTRIBUTION OF OPERATING EXPENSES

FOR SELECTED WHOLESALE MERCHANTS

(all values are expressed in thousands of dollars)

Operating expense percentages	Full-line		
	Number	Net sales	
		Amount	Percent of total
Wholesale merchants, Total	386	$183,660	100.0
Under 8	29	10,944	6.0
8 to 9.99	47	21,307	11.6
10 to 11.99	45	17,698	9.6
12 to 13.99	71	38,033	20.7
14 to 15.99	54	30,651	16.7
16 to 17.99	46	26,332	14.3
18 to 19.99	37	16,411	8.9
20 to 21.99	22	13,379	7.3
22 to 23.99	19	5,214	2.8
24 and over	16	3,691	2.1

The 295 full-line wholesale merchants who reported operating expenses in detail had total costs amounting to 14.3 percent of sales, a figure slightly under the ratio for all wholesalers so classed (14.5%). Selling expenses were the single most important division and amounted to 4.8 percent of sales. Administrative expenses were next in importance (4.3%), followed by warehouse (1.7%), occupancy (1.6%), other (1.4%), and delivery expenses (.5%). Some difficulty was encountered in the classification of expenses. The proper distinction between warehouse and occupancy expenses was in many cases difficult to make, particularly where all the activities were housed in one building and it was necessary to allocate expenses. Also the question of storage was somewhat confusing as some respondents included such costs under warehouse expense while others considered them as occupancy. Similar difficulties occurred with the other classifications, although these variations appeared to represent only a very minor portion of the total.

Administrative expenses vary, in the case of full-line houses, from a low of 2.0 percent in the East South Central division to a high of 5.1 percent for the Pacific States. The low administrative expense of houses in the East South Central area is reflected in low total expense ratio (11.1%). Although the East South Central division does not exceed the average cost in any of the 6 detailed cost divisions, its major economy is in administrative expenses, reflecting, in part, the fact that few divisional headquarters of multi-unit wholesalers are located there. Selling, delivery, warehouse and occupancy expenses also, of

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TABLE 12--OPERATING EXPENSES IN DETAIL
WHOLESALE MERCHANTS WITH SALES OF MORE THAN $100,000 BY GEOGRAPHIC DIVISIONS

(all values are expressed in thousands of dollars)

Kind of Business and Geographic Divisions	Establishments reporting analysis of expenses		Operating expenses (including pay roll) of reporting establishments							
			Total expenses		Administrative expenses % to net sales	Selling expenses % to net sales	Delivery expenses % to net sales	Warehouse expenses % to net sales	Occupancy expenses % to net sales	Other expenses % to net sales
	Number	Net sales	Amount	% to net sales						
FULL-LINE	295	$153830	$21,925	14.3	4.3	4.8	.5	1.7	1.6	1.4
New England	22	12,440	1,811	14.6	4.3	5.2	.4	1.9	2.2	.6
Middle Atlantic	56	35,267	5,020	14.2	4.2	4.8	.7	1.9	1.7	.9
East North Central	62	34,114	5,268	15.4	4.2	4.5	.5	1.8	1.6	2.8
West North Central	32	17,084	2,507	14.7	4.8	5.0	.6	2.0	1.4	.9
South Atlantic	41	16,199	1,965	12.1	3.7	4.4	.3	1.6	1.2	.9
East South Central	13	4,233	469	11.1	2.0	4.5	.5	1.7	1.4	1.0
West South Central	25	7,994	1,146	14.3	4.5	4.9	.4	1.7	1.8	1.0
Mountain	13	5,702	762	13.4	4.4	5.3	.3	1.3	1.1	1.0
Pacific	31	20,797	2,977	14.3	5.1	4.9	.3	1.5	1.3	1.2
APPARATUS AND EQUIPMENT	17	5,284	1,075	20.3	6.3	6.0	1.9	1.9	2.4	1.8
New England	2	x	x	x	x	x	x	x	x	x
Middle Atlantic	6	3,160	567	17.9	5.7	5.8	1.9	2.2	2.0	.3
East North Central	5	1,303	308	23.6	7.8	6.4	1.3	2.1	2.5	3.5
South Atlantic	2	x	x	x	x	x	x	x	x	x
East South Central	1	x	x	x	x	x	x	x	x	x
Pacific	1	x	x	x	x	x	x	x	x	x
WIRING SUPPLIES AND CONSTRUCTION MATERIALS	110	29,331	5,464	18.6	6.6	5.9	1.3	1.6	1.9	1.3
New England	9	2,218	416	18.8	7.0	6.6	.8	.8	2.8	.8
Middle Atlantic	30	8,090	1,812	22.4	7.1	7.6	2.1	1.6	2.0	2.0
East North Central	24	8,273	1,527	18.5	6.5	5.3	1.3	2.7	1.9	.8
West North Central	9	1,881	360	19.1	6.4	6.0	.8	1.6	2.8	1.5
South Atlantic	9	2,095	414	13.4	5.4	4.0	.8	.9	1.0	1.3
East South Central	2	x	x	x	x	x	x	x	x	x
West South Central	8	x	x	x	x	x	x	x	x	x
Pacific	19	3,265	483	14.8	5.5	4.6	.7	.8	1.5	1.7
RADIOS, REFRIGERATORS AND APPLIANCES	250	187,545	34,822	18.6	4.6	9.4	.8	.9	1.3	1.6
New England	17	8,451	1,499	17.7	4.9	8.5	1.0	.5	1.5	1.3
Middle Atlantic	54	72,710	14,437	19.9	4.9	10.6	.8	.9	1.1	1.6
East North Central	53	43,890	8,296	18.9	3.7	10.5	.8	1.4	1.3	1.2
West North Central	30	14,900	2,690	18.1	5.0	8.4	.6	.8	1.7	1.6
South Atlantic	22	11,867	1,963	16.5	4.8	6.1	.8	.6	1.5	2.7
East South Central	11	4,486	887	19.8	4.8	7.8	.9	.9	2.1	3.3
West South Central	25	11,163	1,804	16.2	4.8	7.2	.6	1.0	1.1	1.5
Mountain	5	1,653	285	17.2	4.9	7.4	.4	1.6	1.2	1.7
Pacific	33	18,425	2,961	16.1	4.6	7.0	.9	.8	1.4	1.4

X - Withheld to avoid disclosure of individual operations.

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TABLE 13.--OPERATING EXPENSES IN DETAIL, WHOLESALE MERCHANTS WITH SALES OF MORE THAN $100,000 FOR 13 CITIES OF MORE THAN 500,000 POPULATION

(all values are expressed in thousands of dollars)

Kind of Business and City	Establishments reporting analysis of expenses		Operating expenses (including pay roll) of reporting establishments							
			Total expenses		Administrative expenses % to net sales	Selling expenses % to net sales	Delivery expenses % to net sales	Warehouse expenses % to net sales	Occupancy expenses % to net sales	Other expenses % to net sales
	Number	Net sales	Amount	% to net sales						
FULL LINE	68	$68,545	$10,835	15.8	4.8	4.9	.6	1.9	1.7	1.9
Baltimore	3	2,032	239	11.8	3.0	5.0	.4	1.9	.9	.6
Boston	4	6,212	1,044	16.8	4.8	6.2	.4	2.1	2.7	.6
Buffalo	5	2,007	322	16.0	5.9	5.3	1.0	1.1	1.6	1.1
Chicago	8	9,463	1,446	15.3	5.2	4.0	.9	2.1	1.6	1.5
Cleveland	5	2,980	1,148	38.5	5.3	7.0	.7	2.3	1.8	21.4
Detroit	5	5,328	700	13.1	3.4	4.9	.3	2.0	1.4	1.1
Los Angeles	5	6,904	859	12.4	4.9	4.3	.3	1.3	.9	.7
Milwaukee	4	3,452	447	12.9	4.1	4.5	.2	2.0	1.5	.6
New York City	14	12,752	1,903	14.9	4.7	4.1	.9	2.1	1.9	1.2
Philadelphia	5	5,690	847	14.9	4.3	6.4	.5	1.9	1.3	.5
Pittsburgh	3	3,525	453	12.9	3.9	4.4	.4	1.6	1.7	.9
St. Louis	4	4,230	789	18.7	7.3	5.2	.9	2.4	1.6	1.3
San Francisco	3	3,970	638	16.1	5.7	4.9	.4	2.2	2.0	.9
APPARATUS AND EQUIPMENT	12	3,915	754	19.3	6.2	5.5	1.4	2.2	2.4	1.6
WIRING SUPPLIES AND CONSTRUCTION MATERIALS	59	16,755	3,307	19.7	6.7	6.5	1.6	1.6	1.8	1.5
Baltimore	4	615	132	21.5	8.2	6.0	1.6	.5	1.6	3.6
Boston	5	1,389	272	19.6	7.1	7.3	1.1	.8	2.4	.9
Buffalo	1	x	x	x	x	x	x	x	x	x
Chicago	5	1,863	313	16.8	5.9	4.9	2.6	1.6	1.2	.6
Cleveland	2	x	x	x	x	x	x	x	x	x
Detroit	4	2,789	409	14.7	5.2	4.8	.8	1.9	1.9	.1
Los Angeles	7	1,378	179	13.0	5.3	3.9	.9	.6	.9	1.4
Milwaukee	2	x	x	x	x	x	x	x	x	x
New York City	20	5,957	1,396	23.4	7.2	7.8	2.5	1.8	2.0	2.1
Philadelphia	1	x	x	x	x	x	x	x	x	x
Pittsburgh	1	x	x	x	x	x	x	x	x	x
St. Louis	2	x	x	x	x	x	x	x	x	x
San Francisco	5	897	153	17.1	6.5	6.0	.6	.7	1.9	1.4
RADIOS, REFRIGERATORS AND APPLIANCES	88	99,463	18,693	18.8	4.6	9.8	.8	.9	1.2	1.5
Baltimore	3	1,327	243	18.3	4.7	7.5	.8	.4	1.6	3.3
Boston	6	5,414	877	16.2	3.8	8.9	.8	.5	1.5	.7
Buffalo	2	x	x	x	x	x	x	x	x	x
Chicago	11	10,282	1,819	17.7	4.4	7.4	1.6	2.0	1.1	1.2
Cleveland	5	3,642	725	19.9	5.2	9.6	1.5	1.1	1.6	.9
Detroit	5	3,310	492	14.9	3.4	5.6	.4	1.1	1.3	3.1
Los Angeles	3	x	x	x	x	x	x	x	x	x
Milwaukee	5	1,738	277	15.9	5.5	6.7	.6	.7	.9	1.5
New York City	21	21,231	4,790	22.6	7.6	8.9	1.3	1.2	1.8	1.8
Philadelphia	7	35,349	6,446	18.2	2.8	13.1	.2	.4	.5	1.2
Pittsburgh	3	4,525	804	17.8	5.6	6.1	.9	1.2	1.7	2.3
St. Louis	7	4,265	834	19.6	5.3	9.2	.9	.5	1.6	2.1
San Francisco	10	6,920	1,072	15.5	4.4	6.1	1.3	.8	1.5	1.4

X - Withheld to avoid disclosure of individual operations.

course, differ from one section to another. It is nevertheless assuring to note the relative consistency of the detailed ratios. For example, selling expenses average 4.8 percent for the country as a whole, reaching a low of 4.4 percent for the South Atlantic area and a high of 5.3 percent for the Mountain States, although only 2 of the 9 divisions have identical selling ratios. It is, of course, impossible to tell how much of the variation is due to the business efficiency of individual establishments and how much results from inherent differences between the geographic areas.

In the case of apparatus and equipment, wiring supplies and construction materials, and electrical appliances, similar information is given in Table 12. There are, in some cases, too few establishments to show the information for each geographic division without the disclosure of individual operations. In addition, a particular house may have certain peculiar fsatures of operation which exaggerate certain types of expense; therefore the detailed figures should be used with caution when the number of establishments, although not a disclosure, is small.

In Table 13 a similar analysis is made for the 13 leading wholesale trade centers of the country. The 68 full-line wholesale merchants located in the 13 selected cities had costs amounting to 15.8 percent of sales or a ratio of 1.5 percent above that (14.3%) for the 295 wholesale merchants analyzed in Table 12. A comparison of the two tables indicates a slightly greater cost of doing business in each of the functional divisions for wholesale merchants operating in the large cities. The largest increase appears in administrative expenses which rise one-half of 1 percent from 4.3 percent for the country to 4.8 percent for the 13 cities. The larger expense ratios for the establishments in big cities are to be expected because of the higher rents and the larger territories which they are likely to serve, as well as the tendency for wages to be higher in the bigger cities.

For apparatus and equipment, wiring supplies and construction materials, and electrical appliances, similar comparisons are also possible. These two tables give a comprehensive picture of detailed cost analysis for wholesale merchants with sales of more than $100,000, for each merchandise classification of the electrical trade, and, used with caution where the number of establishments is small, they offer the individual concern an excellent standard against which to match its individual performance. In this way, it becomes possible for a particular house to discover where its above-average cost appears and to decide whether this excess can be deleted or whether it is caused by some peculiar and profitable idiosyncrasy of its operation.

Effect of Business Size on Expenses

The significance of operating expense figures is enhanced when the group to which average operating expenses are applied is analyzed in detail. As a result, wholesale merchants and manufacturers' sales branches were grouped according to the size of their annual business in 1935. In Table 14, the data are shown by 6 size groups, the smallest including houses with annual sales under $50,000 and the largest composed only of establishments with sales equalling or exceeding $1,000,000.

An examination of the data which refers to wholesale merchants proves conclusively that operating expenses ratios declined from the smallsst to the largest size groups. This decline from a cost ratio of 24.1 percent for establishments with an annual business under $50,000 to a low point of 16.3 percent for establishments with sales exceeding $1,000,000 is consistent from each group to the next larger one. The decline, however, is most rapid between the smallest establishments with sales under $50,000 up to that group with sales from $200,000 to $500,000, the drop being from 24.1 percent to 16.9 percent or about one-third. Above a $200,000 volume, where the expense ratio is 16.9 percent, the decline is much slower. The one-half million to $1,000,000 group shows an expense ratio of 16.8 percent and the $1,000,000 and over group a still lower cost (16.3%). This drop of six-tenths of 1 percent between the three larger size groups is significant, yet its magnitude is in no way comparable to the drop from 24.1 percent for concerns in the smallest size group to the 16.9 percent ratio for the $200,000 to one-half million dollar group. It appears, therefore, that the wholesale merchants falling in the size groups under $200,000 operated at costs considerably above the average and were, to that extent, at a competitive disadvantage. In the size groups above $500,000, further economies are obtained by the larger establishments but these are less marked.

The high-cost establishments in the size groups with annual sales under $200,000 account for 18.5 percent of the total business of electrical wholesals merchants, while the lower-cost houses in the large size brackets account for four-fifths (81.5%) of the total business done by wholesale merchants, indicating an adaptation of the electrical trade to that size of establishment which can operate efficisntly at low cost.

Examining this information for the 9 geographic divisions, as shown in Table 15, it is possible to note differences which probably reflect real variations both in marketing conditions and in business practice. The South Atlantic and East South Central areas have the lowest expense ratios (15.8 percent for each), while the Middle Atlantic area is the most expensive in which to do business. In every division, the economy of large size is demonstrated, although, interestingly enough, the lowest cost ratios appear in the size group from $200,000 to $499,999 in the West North Central (16.4%), the South Atlantic (14.6%) and the West South Central (15.5%). This fact rather strengthens the conclusion that efficient operation is not obtained in the smallest size groups but that, once moderate size is reached, further economies through expansion are minute.

For the 13 cities, the expenses of wholesale merchants are .5 of one percent higher than for the country as a whole. This is consistently true for each size group except the largest. For concerns with a sales volume of over one million dollars, the expense ratio for the 13 cities was 15.9 percent or .4 of one percent lower than for the country as a whole. Due to the specific conditions existing in particular cities, there is a wide range of expense ratios which is undoubtedly exaggerated because of the small number of

establishmente which fall into some of the size groups in certain cities. As a result of these factors, it is doubtful whether too much significance should be given to the individual figures for a city where the number of establishmente, although not a disclosure, ie probably inadequate for the purpose of making statistical comparisons of averages. In general, however, the conclusion that establishments with large sales have lower costs than those with small volume, is strengthened.

TABLE 14.--EXPENSES BY BUSINESS-SIZE GROUPS

Business-size groups	Number of establishments	Net sales		Total expenses	
		Amount (add 000)	Percent to total	Amount (add 000)	Percent to net sales
WHOLESALE MERCHANTS					
United States Total	2,397	$558,514	100.0	$97,412	17.4
Under $50,000	955	20,393	3.7	4,906	24.1
$50,000 to $99,999	401	28,774	5.1	6,482	22.5
$100,000 to $199,999	374	53,966	9.7	10,394	19.3
$200,000 to $499,999	411	130,460	23.4	22,077	16.9
$500,000 to $999,999	159	111,353	19.9	18,711	16.8
$1,000,000 and over	97	213,568	38.2	34,842	16.3
MANUFACTURERS' SALES BRANCHES					
United States Total	428	$349,819	100.0	$31,685	9.1
Under $50,000	116	1,822	.5	501	27.5
$50,000 to $99,999	61	4,411	1.3	982	22.3
$100,000 to $199,999	49	6,984	2.0	1,484	21.2
$200,000 to $499,999	70	22,164	6.3	2,982	13.5
$500,000 to $999,999	35	25,730	7.4	3,186	12.4
$1,000,000 and over	97	288,708	82.5	22,550	7.8

Manufacturers' sales branchee show a similar declining cost ratio as the size of the business becomes larger. Those branch houses with annual salee under $50,000 have a cost ratio of 27.5 percent. As the size increases, the coet ratio drops to a low of 7.8 percent for thoee branch houses with sales of $1,000,000 and over. Ae in the case of wholeeale merchante, high cost operation is characteristic of establishments with annual sales under $200,000. In the case of sales branchee, however, the rate of coet decline continuee through the upper brackets. In fact, the size group doing a business between one-half million and $1,000,000 had coets of 12.4 percent as compared with costs of 7.8 percent for sales branchee whose volume equalled or exceeded $1,000,000. (This very low cost ratio for eales branches doing a business over one million dollare ie to some extent due to a large volume of "bookings" or orders which are filled at the plant and shipped direct to the industrial customer.) As the economy of larger and larger size ie eo apparent for manufacturers' eales branchee in the electrical trade, it is not surprising to find that over four-fifths (82.5%) of total salee are made by the largest size group whoee annual volume equals or exceeds $1,000,000. Both wholesale merchante and manufacturers' sales branches in the electrical trade have adapted their sizes to secure low cost and efficient operation.

To summarize, 28 percent of the wholesale merchants, the larger ones with lower costs, do 81.5 percent of the total business while 30.8 percent of manufacturere' sales branches, the larger ones with lowsr costs, do 89.9 percent of the total businese.

In Table 16 the operating expensee of full-line wholeeale merchants and manufacturers' eales branches are analyzed in eimilar detail. In thie caee, the eize groups have been somewhat changed. All establishments doing an annual volume under $200,000 have been grouped in one class while the eetablishments with sales of $1,000,000 or over have been split into two groups, the first with sales between $1,000,000 and $2,000,000 and the second with sales exceeding $2,000,000. An examination of the data for full-line wholesale merchants demonstratee the conclusions which have already been reached in Table 14. It is eignificant to note that the expenses of the housee with eales from $200,000 to one-half million dollars have a very low ratio of 13.6 percent, compared with cost of 15.6 percent for smaller houses and 14.8 percent for houses with salee between one-half million and $1,000,000. Thie situation drives home the conclusion that economical operation for wholesale merchants begins with a eales volume of between $200,000 and $500,000. Otherwiee, the trend of expenees for full-line merchants and branchee is very eimilar to that shown for all lines of electrical merchandise in Table 14.

TABLE 15.--SALES AND EXPENSES BY BUSINESS-SIZE GROUPS FOR WHOLESALE MERCHANTS BY GEOGRAPHIC DIVISIONS AND CITIES

(Table is in two parts -- continued below)

Division and City	Net sales size groups											
	All size groups			Under $50,000			$50,000 to $99,999			$100,000 to $199,999		
	Number of estab.	Net sales (add 000)	Expen. % of sales	Number of estab.	Net sales (add 000)	Expen. % of sales	Number of estab.	Net sales (add 000)	Expen. % of sales	Number of estab.	Net sales (add 000)	Expen. % of sales
United States Total	2,397	$558,514	17.4	955	$20,393	24.1	401	$28,774	22.5	374	$53,966	19.3
New England	195	34,008	18.0	81	1,958	24.3	42	3,125	21.1	31	4,575	18.8
Middle Atlantic	700	175,321	18.4	321	7,334	24.3	141	9,774	24.2	91	12,658	21.4
East North Central	528	128,279	17.8	220	4,407	25.0	70	5,025	21.9	85	12,238	20.6
West North Central	207	49,970	17.8	66	1,214	26.6	30	2,286	23.9	37	5,254	19.7
South Atlantic	225	52,325	15.8	70	1,449	20.2	38	2,696	23.7	39	5,457	16.8
East South Central	65	13,026	15.8	20	450	23.1	5	389	16.5	14	2,068	15.7
West South Central	118	28,356	16.3	27	518	25.5	16	1,207	17.5	26	4,054	16.8
Mountain	58	11,733	16.7	23	629	22.4	5	410	21.5	10	1,665	18.1
Pacific	301	65,496	15.9	127	2,434	22.9	54	3,862	21.0	41	5,987	17.4
Total, 13 Cities	990	284,506	17.9	431	9,340	25.9	186	12,970	23.6	126	17,626	22.2
Baltimore	32	7,038	17.3	10	212	22.2	6	412	18.7	5	706	22.8
Boston	51	15,986	18.2	18	469	28.4	14	1,096	22.8	7	896	19.1
Buffalo	21	5,034	19.2	4	66	39.4	7	497	35.4	4	630	23.2
Chicago	134	34,126	18.4	68	1,321	27.8	17	1,167	27.0	18	2,550	23.4
Cleveland	42	10,791	20.3	12	258	26.7	9	628	24.0	6	957	25.8
Detroit	44	16,196	15.8	15	423	19.6	6	420	16.2	2	272	44.1
Los Angelee	94	22,526	16.3	40	784	23.0	22	1,567	25.7	10	1,495	15.5
Milwaukee	31	7,961	15.7	12	171	31.6	3	196	22.4	4	503	18.3
New York City	342	62,126	20.7	171	3,835	25.9	69	4,739	23.5	40	5,285	23.8
Philadelphia	75	59,442	16.1	34	865	21.8	15	960	21.0	9	1,313	20.9
Pittsburgh	26	11,329	16.6	10	223	32.7	4	272	21.3	3	444	16.7
St. Louis	39	13,578	20.5	14	306	30.1	4	293	17.4	8	1,127	20.9
San Francieco	59	18,373	14.8	23	407	27.0	10	723	20.7	10	1,448	21.1

TABLE 15. (Continued)

Division and City	Net sales size groups (continued)								
	$200,000 to $499,999			$500,000 to $999,999			$1,000,000 and over		
	Number of estab.	Net sales (add 000)	Expen. % of sales	Number of estab.	Net sales (add 000)	Expen. % of sales	Number of estab.	Net sales (add 000)	Expen. % of sales
United States Total	411	$130,460	16.9	159	$111,353	16.8	97	$213,568	16.3
New England	27	8,488	18.8	9	5,890	15.1	5	9,972	16.4
Middle Atlantic	84	25,795	18.7	26	17,584	19.6	37	102,176	16.7
East North Central	92	29,325	17.3	41	29,636	16.4	20	47,648	17.2
West North Central	45	15,085	16.4	19	13,780	18.1	10	12,351	16.6
South Atlantic	46	14,750	14.6	25	17,816	15.3	7	10,147	15.1
East South Central	22	7,048	15.6	3	1,976	14.5	1	1,095	15.8
West South Central	30	9,287	15.5	17	10,585	15.9	2	2,705	17.6
Mountain	15	4,894	16.9	4	2,727	14.8	1	1,408	13.9
Pacific	50	15,788	16.5	15	11,359	16.7	14	26,066	13.5
Total, 13 Citiee	115	35,722	20.2	63	46,056	18.3	69	162,792	15.9
Baltimore	5	1,375	16.9	6	4,333	16.1	--	--	--
Boston	3	1,086	28.4	5	3,560	15.2	4	8,879	16.9
Buffalo	4	1,621	17.3	1	814	16.0	1	1,406	14.9
Chicago	14	4,345	22.3	7	4,926	18.8	10	19,817	15.6
Cleveland	8	2,515	22.2	5	4,197	16.4	2	2,236	21.2
Detroit	9	2,995	16.3	7	4,868	17.5	5	7,218	13.1
Los Angelee	12	3,681	18.6	3	1,890	12.6	7	13,109	14.8
Milwaukee	6	1,873	19.6	5	3,630	12.8	1	1,588	14.2
New York City	37	11,133	20.7	11	7,540	22.7	14	29,594	18.5
Philadelphia	6	1,496	22.4	2	1,390	21.0	9	53,418	15.5
Pitteburgh	1	232	18.5	2	1,178	22.5	6	8,980	15.2
St. Louie	2	687	23.0	6	4,924	22.4	5	6,241	18.4
San Francieco	8	2,683	17.6	3	2,806	17.7	5	10,306	11.4

TABLE 16.--OPERATING EXPENSES OF FULL-LINE WHOLESALE MERCHANTS AND MANUFACTURERS' SALES BRANCHES (FULL- AND SPECIALTY-LINE) IN THE ELECTRICAL TRADE BY BUSINESS-SIZE GROUPS

Business-size groups	Number of establishments included	Net sales		Total expenses Percent to net sales	Number of salesmen	Average sales per salesman	Salesmen's compensation Percent to net sales	Stocks on hand Dec. 31 Percent to net sales
		Amount (add 000)	Percent to total					
A - WHOLESALE MERCHANTS								
Total, all sizes	386	$183,660	100.0	14.4	2,707	$68,000	3.0	14.4
Under $200,000	115	17,594	9.6	15.6	353	50,000	3.3	18.1
$200,000 to $499,999	167	55,346	30.1	13.6	802	69,000	2.8	14.3
$500,000 to $999,999	63	43,406	23.6	14.8	566	77,000	2.9	14.7
$1,000,000 to $1,999,999	33	45,651	24.9	14.8	607	75,000	3.2	14.2
$2,000,000 and over	8	21,663	11.8	13.7	379	67,000	3.0	11.2
B - MANUFACTURERS' SALES BRANCHES								
Total, all sizes	151	$193,708	100.0	10.6	1,712	$113,000	2.9	6.0
Under $200,000	35	4,020	2.1	24.1	64	63,000	4.2	13.9
$200,000 to $499,999	37	11,542	5.9	15.0	162	71,000	4.1	12.1
$500,000 to $999,999	23	17,210	8.9	12.0	147	117,000	2.7	10.2
$1,000,000 to $1,999,999	33	44,680	23.1	12.2	341	131,000	2.4	8.9
$2,000,000 and over	23	116,256	60.0	8.9	998	216,000	3.0	3.5

Certain special types of information which have a direct relation to total expenses have also been included in Table 16. These are number of salesmen, average sales per salesman, total compensation of salesmen, and stocks on hand. (Since the information necessary for this tabulation did not appear on every schedule, Table 16 gives data for a selected sample.) The number of salesmen per establishment for wholesale merchants rises from three per establishment for houses with a volume under $200,000 per year to a high of 40 salesmen per establishment for those houses with a volume of $2,000,000 or over. More significant, however, is a rise of average sales per salesman from $50,000 each for houses in the smallest size group to average sales of $67,000 to $77,000 in the larger size groups. Thus, although the number of salesmen increased as the size of the house expanded, sales rose even faster, and sales per salesman increased. An examination of the column in which the total compensation of salesmen appears, shows, however, that no economy was realized by larger sales per salesman, probably because each house, as it expands its business, tends to reach into a larger territory with a resultant rise in salesmen's traveling expenses. This combination of factors leads to a relatively stable cost for total salesmen's compensation.

The value of stocks on hand (at cost) per dollar of sales decreases consistently as the size of the establishment increases. For concerns with sales under $200,000 the ratio of stocks to annual sales is 18.1 percent and drops until it reaches a low of 11.2 percent for concerns doing over $2,000,000 annually. A lower ratio of stocks to total sales is apparently one of the economies of large scale operations. An examination of the information shown for manufacturers' sales branches shows a very similar picture. The economies of size, however, seem to be more significant in the case of sales branches than in the case of wholesale merchants. As this difference between the two types of operation has already been discussed in connection with Table 14, it is merely noted here.

Operating Expenses in Detail. The selected wholesale merchants and manufacturers' sales branches shown in Table 16 are analyzed in Table 17 both by business size groups and by operating expenses in detail. As the size of the business done by the individual house increases, it has already been shown that total expenses decrease. From Table 17, it is possible to determine what types of expense rise proportionately as size increases, what types remain relatively changed, and what divisions increase faster than size.

In the case of full-line wholesale merchants, administrative expenses are 4.7 percent of net sales for all size groups combined. For establishments with sales of $2,000,000, there is a substantial economy in administrative cost although the picture varies between the other size groups. Selling expenses rise as the size of the house grows and are largest for wholesale merchants with sales exceeding $2,000,000. Delivery expenses, in contrast, show a slowly falling tendency as the size of the house increases. The same is true for occupancy expenses. Warehouse costs vary considerably with an upward movement as size rises. The same, in general, is true for "other" expenses. The economies of large size are realized mainly in administrative economy and low cost of occupancy with some small saving in delivery expenses. The economies in administrative and occupancy expenses exceed the rise in selling expenses so that the larger establishments show lower total cost ratios as the sales volume becomes greater.

TABLE 17.--OPERATING EXPENSES IN DETAIL BY BUSINESS-SIZE GROUPS (FULL-LINE)
WHOLESALE MERCHANTS AND MANUFACTURERS' SALES BRANCHES

(all values are expressed in thousands of dollars)

Business-size groups	Establishments reporting analysis of expenses		Operating expenses (including pay roll) of reporting establishments							
			Total expenses		Administrative expenses % to net sales	Selling expenses % to net sales	Delivery expenses % to net sales	Warehouse expenses % to net sales	Occupancy expenses % to net sales	Other expenses % to net sales
	Number	Net sales	Amount	% to net sales						
A - FULL-LINE WHOLESALE MERCHANTS										
Total	386	$183,660	$26,489	14.4	4.7	5.0	.6	1.7	1.5	.9
$100,000 to $199,999	115	17,594	2,750	15.6	5.2	4.8	.9	1.2	2.0	1.5
$200,000 to $499,999	167	55,346	7,543	13.6	4.4	4.7	.6	1.5	1.6	.9
$500,000 to $999,999	63	43,406	6,444	14.8	4.9	5.3	.6	1.8	1.6	.6
$1,000,000 to $1,999,999	33	45,651	6,778	14.8	5.1	5.0	.5	1.7	1.5	1.0
$2,000,000 and over	8	21,663	2,974	13.7	3.5	5.5	.5	2.0	1.4	.8
B - MANUFACTURERS' SALES BRANCHES										
Total	151	$193,708	$20,529	10.6	2.9	5.2	.5	.6	.9	.5
$100,000 to $199,999	35	4,020	971	24.1	5.9	11.5	1.3	1.6	1.6	2.2
$200,000 to $499,999	37	11,542	1,735	15.0	3.5	7.6	1.1	.4	.9	1.5
$500,000 to $999,999	23	17,210	2,063	12.0	2.4	5.9	1.1	1.1	.7	.8
$1,000,000 to $1,999,999	33	44,680	5,451	12.2	3.4	5.2	.7	1.0	1.0	.9
$2,000,000 and over	23	116,256	10,309	8.9	2.6	4.6	.3	.4	.9	.1

The low cost group between $200,000 and $500,000 shows a material saving in selling expenses, warehouse cost and a low administrative overhead. As some of the houses in this group have proprietors and partners working full-time and the compensation of these persons is not included in the expenses, selling expenses and administration costs may be too low. Similarly, in the case of multi-unit organizations, the general supervisory expense is frequently allocated to district headquarters rather than to the individual house. Where either of these situations exists, there is a tendency to understate the total expenses of establishments falling in this size group; therefore, the significance of the low cost of this size group may be limited to demarking clearly the smallest size of house which can operate at reasonably low cost.

In the case of manufacturers' sales branches, administrative, selling, and delivery expenses drop materially as the sales volume rises. Warehouse, occupancy and other expenses vary considerably between the size groups so that no general conclusions can be reached. The considerable drop in total expenses between the smallest and the largest size groups is thus accounted for by the consistent drop in administrative and selling expenses, very little of which saving is taken up by rising cost in other types of expenses.

Employment and Pay Roll

The 3,767 electrical wholesalers in the United States in 1935 had 40,796 full-time and part-time employees, or an average of just under 11 employees per establishment. As shown in Table 18, the 40,796 employees received total compensation of $76,380,000 or an annual average wage of $1,872 each. Total pay roll amounted to 6.9 percent of net sales. Of the total wages of $76,380,000, almost all ($75,528,000) was received by full-time employees. While full-time pay roll amounted to 6.8 percent of net sales, the part-time pay roll of $842,000 amounted to only .1 of one percent of sales. It is also significant to note that, for each of the four types of operation, this very low total for part-time pay roll is maintained. The electrical trade is, therefore, typically one of full-time employment.

Full-service and limited-function wholesalers with 2,438 establishments had 30,088 employees or an average of slightly over 12 employees each. In the case of manufacturers' sales branches, the average was just over 18 employees; for manufacturers' sales offices between 6 and 7; and for agents a little under 2 employees per establishment. As manufacturers' sales offices and agents do not ordinarily take care of the physical handling of the merchandise, while full-service and limited-function wholesalers and manufacturers' sales branches perform this function, it is not surprising that the latter have the larger employment.

Pay roll was a larger element of expense for full-service and limited-function wholesalers than for the other types, including manufacturers' sales branches which had a larger number of employees per establishment. This is shown by the fact that full-service and limited-function wholesalers had a total pay roll equal to 9.1 percent of sales and sales per employee averaged $19,162, while manufacturers' sales branches had a pay roll cost of only 5.1 percent of sales, in spite of a larger number of employees per establishment (18) than full-service and limited-function wholesalers (12), because sales per employee averaged $44,665. For manufacturers' sales offices, total pay roll amounted to 3.2 percent of sales and the average sales per employee were $82,888; for agents, average pay roll equalled 4.0 percent of annual sales and sales per employee were $37,562. Sales per employee, rather than employees per establishment, is thus seen to be the vital factor in determining the importance of pay roll as an element of total expense.

TABLE 18.--EMPLOYMENT AND PAY ROLL, PART-TIME AND FULL-TIME COMBINED

(all values are expressed in thousands of dollars)

Type of Operation	Number of Establishments	Net Sales	Active Proprietors and Firm Members	Employees (full-time & part-time) Average for year	PAY ROLL					
					Total		Full-Time		Part-Time	
					Amount	% to Net Sales	Amount	% to Net Sales	Amount	% to Net Sales
U. S. TOTAL	3,767	$1,109,404	1,592	40,796	$76,380	6.9	$75,528	6.8	$852	.1
Full-Service & Limited-Function Wholesalers	2,438	576,542	1,051	30,088	52,495	9.1	51,924	9.0	571	.1
Manufacturers' Sales Branches	428	349,819	6	7,832	17,676	5.1	17,544	5.0	132	.1
Manufacturers' Sales Offices	263	137,180	1	1,655	4,377	3.2	4,285	3.1	92	.1
Agents	638	45,863	534	1,221	1,832	4.0	1,775	3.9	57	.1

In addition to the 40,796 paid workers, the electrical trade gave employment to 1,592 proprietors and firm members of unincorporated concerns. Since the remuneration of these persons was, in most cases, impossible to determine, the compensation for the entire group has been omitted from all pay roll figures and their number from all employment figures.

Regularity of Employment.-During 1935, employees in the electrical trade averaged 40,796 persons. Taking this average as 100.0, it is found in Table 19 that employment varied from a low of 97.7 in January to a high of 101.9 in December, a total spread of 4.2 percent. When it is considered that 1935 was a year of improving business conditions, this total variation appears very modest and characterizes the electrical trade as one of stable employment. In addition, the difference between employment in consecutive months was always under 1 percent with a consistently rising trend.

Turning to the geographic divisions, it is found that New England duplicated the national picture with even smaller divergencies from the average (98.1 to 101.2). The Middle Atlantic division showed a rising employment from January (101.6) to April (102.1), when employment fell sharply in May (98.2) and then fluctuated for several months with a slight tendency to rise. In no month after April did employment in the Middle Atlantic States reach the annual average, although it approached this closely in October (99.9).

The remaining seven divisions of the country followed the national pattern with low employment in January (South Atlantic in February) and a fairly regular increase in the workers until the peak of employment was reached in December (South Atlantic and East South Central in November). The variation from low employment to high employment was somewhat greater for these areas than for the nation as a whole. The total rise was 8.3 percent for the East North Central, 7.2 percent for the West North Central, 6.1 percent for the South Atlantic, 5.8 percent for the East South Central, 7.6 percent for the West South Central,

4.8 percent for the Mountain, and 9.1 percent for the Pacific division. The eectional differencee within the country and the unevenees of the improvement in business conditions are indicated by these figuree.

TABLE 19.--MONTHLY EMPLOYMENT BY GEOGRAPHIC AREAS

(Full-time and part-time employees combined)

Month	United Statee		New England	Middle Atlantic	East North Central	Weet North Central	South Atlentic	East South Central	Weet South Central	Mountain	Pacific
	Number	% of annual average	% of annual average	% of annual average	% of annual average	% of annual average	% of annual average	% of annual average	% of annual average	% of annual average	% of annual average
Average for year	40,796		2,755	12,805	10,015	3,551	3,552	782	1,816	807	4,713
Percent of annual average		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
January	39,849	97.7	98.1	101.6	94.8	95.5	97.1	96.7	96.1	97.3	95.8
February	40,050	98.2	98.3	101.8	95.8	96.5	96.6	97.1	97.0	98.3	96.1
March	40,342	98.9	98.9	101.6	97.4	98.1	97.4	97.6	98.0	98.7	97.0
April	40,694	99.7	99.5	102.1	99.1	99.3	98.4	98.3	97.9	100.1	97.4
May	40,516	99.3	99.8	98.2	100.9	100.3	99.6	100.0	98.8	99.0	97.9
June	40,624	99.6	99.9	98.8	100.4	100.3	99.8	100.5	99.4	100.0	98.8
July	40,803	100.0	100.5	98.7	100.4	101.0	100.8	101.2	99.8	100.6	101.1
August	41,015	100.5	101.2	99.1	101.3	101.0	101.3	100.9	100.4	101.1	101.3
September	41,066	100.7	101.2	99.1	101.2	100.7	101.4	101.0	102.7	100.5	101.9
October	41,527	101.8	100.5	99.9	102.9	102.5	102.3	102.4	103.1	101.3	103.9
November	41,506	101.7	100.9	99.8	102.7	102.1	102.7	102.5	103.1	101.0	103.9
December	41,565	101.9	101.2	99.3	103.1	102.7	102.6	101.8	103.7	102.1	104.9

Through an examination of Table 20, it ie poesible to compare employment in the electrical trade for 1935, 1933, and 1929. Average employment was greatest in 1929 when it included 66,210 persons, then it dropped to 37,521 in 1933, and rose from thie low point to 40,796 in 1935. The seasonal variation in each of these years is rather significant. Lowest employment occurred during the early part of each year and wae followed by a elowly expanding number of workers until the employment peak came at the end of the year. For 1929, figures are available only quarterly and the variation wae from 97.2 in the first quarter to 101.8 in the fourth quarter, or 4.6 percent. In 1933, the low of 95.3 was reached in March with the December high reaching 105.7, a difference of 10.4. For 1935, the January low of 97.7 was followed by elowly rising emplcyment until the December high of 101.9 was reached, the variation being 4.2. Since 1933 included extremes of business conditions, it ie quite likely that both 1935 and 1929 are more representative of normal seaeonal variation. In general, it appears that the electrical trade has fairly etable employment with an annual variation ordinarily under 5 percent, the eub-normal monthe appearing very early in the year and being followed by slowly rising emplcyment until the peak is reached in November and December.

TABLE 20.--MONTHLY EMPLOYMENT: 1935, 1933 and 1929

Month	Employees (full-time and part-time combined)					
	1935		1933		1929	
	Number	Percent of average	Number	Percent of average	Number	Percent of average
Average for year	40,796	100.0	37,521	100.0	66,210	100.0
January	39,849	97.7	36,006	96.0		
February	40,050	98.2	35,915	95.7	64,331	97.2
March	40,342	98.9	35,754	95.3		
April	40,694	99.7	35,858	95.6		
May	40,516	99.3	36,069	96.1	65,805	99.4
June	40,624	99.6	36,604	97.6		
July	40,803	100.0	37,515	100.0		
Auguet	41,015	100.5	38,509	102.6	67,263	101.6
September	41,066	100.7	39,258	104.6		
October	41,527	101.8	39,528	105.3		
November	41,506	101.7	39,572	105.5	67,443	101.8
December	41,565	101.9	39,660	105.7		

Analysis of Employment and Pay Roll for a Representative Week

On the 1935 Wholesale schedule, wholesale establishments were asked to analyze their employment and pay roll for a selected week. Employees were divided into six types, -- executive and salaried corporation officers, office and clerical employees, inside selling employees, outside selling employees, warehouse employees and "other" employees. The week ending October 26, 1935, was selected as a representative period. Where, due to peculiarities of an individual concern's operations, this week was not representative, an establishment was requested to choose another week in its busy season and to report for this period.

The analysis of employment in Table 19 indicates that October was a month of above-average employment. Similarly, establishments which found it necessary to select a week other than that which ended October 26, reported employment and pay roll for a week in their busy season. As a result the 3,374 establishments which gave satisfactory detailed information, reported total employment and pay roll for a period in which these exceeded the average figures for 1935. The remaining 393 establishments were excluded from the analysis because of irregular employment for occasional months only, because their records were such that they were unable to give the desired information, or because they had no paid personnel.

The total employees for the 3,374 establishments analyzed were composed of 39,705 full-time employees who received 96.8 percent of the total pay roll for the week. Part-time employees were 1,292 in number and received 3.2 percent of the weekly pay roll. Since it was impossible to determine the amount of time worked by the part-time employees, the detailed analysis is limited to full-time employees only. Full-time employees were defined as persons who were regularly working 4 or more hours each business day or more than 3 full days per week, while all persons working less than this amount were to be classified as part-time employees.

Office and clerical employees were the most numerous group in the electrical trade and numbered one-third (34.6%) of total employees and accounted for one-fourth (25.8%) of total pay roll. In the case of manufacturers' sales branches, office and clerical employees were relatively more numerous and numbered almost one-half (46.1%) of the full-time employees. The average weekly wage for this type of workers was $27.75, reaching a peak of $35.20 for manufacturers' sales branches and a low of $19.86 for agents.

Selling employees were the next most numerous group. When inside and outside salesmen were combined, they accounted for 31.3 percent of the total number of employees. With respect to pay roll, they were the most important group and their remuneration totalled two-fifths (39.6%) of total pay roll. Except for executives and salaried officers, selling employees were the best paid group in the electric trade. Outside selling employees received an avcrage weekly compensation of $52.81, while inside salesmen received $31.74. This large difference between the two classes of selling employees probably reflects the fact that inside selling employees frequently spend a portion of their time in other types of work while outside salesmen specialize more in actual selling. In addition, many semi-executives in sales branches and sales offices are classified as outside selling employees. The compensation of salesmen is highest for manufacturers' branches and offices, being considerably above the compensation given for similar activities by both full-service and limited-function wholesalers and agents. This probably indicates that manufacturers find it profitable to use a highly skilled and specialized type of salesman in their sales branches and offices.

"Other" employees were the next most numerous type. By "other" employees were meant the persons who did not fall clearly under any one of the five specified classifications. Here were included (a) those performing duties which would not be properly classified elsewhere (maintenance employees, charwomen, elevator operators, truck drivers, yard employees, salvage employees, service men, etc.) and (b) those performing functions falling within two or more of the other classifications, no one of which dominated. This latter situation occurred particularly in the case of the smaller wholesalers where employees divided their time between several activities, such as inside selling, warehousing and delivery. "Other" employees accounted for one-seventh (13.9%) of total workers and one-tenth (10.1%) of total pay roll. Their average weekly wages were $26.94. "Other" employees were more numerous for full-service and limited-function wholesalers than for the other three types of operation. The figure for manufacturers' sales offices is low (4.9%), mainly because a good many of this group would be delivery and truck men, a type of employee which an establishment not carrying stocks for delivery would find unnecessary. This situation is further reflected in the high weekly wage of $47.75 enjoyed by "other" employees working for manufacturers' sales offices. This indicates that, for sales offices, the persons classed as "other" employees are not comparable to warehouse or clerical workers.

Warehouse employees accounted for almost one-seventh (13.0%) of total employees in spite of the fact that manufacturers' sales offices, since they have no stocks for delivery, hire no persons falling within this group. For both warehouse and "other" employees, full-service and limited-function wholesalers hire the vast majority of the two groups. Manufacturers' sales branches also employ a number of these people but their importance becomes much smaller for agents and they become even less numerous in the case of sales offices. For full-service and limited-function wholesalers and manufacturers' sales branches, remuneration is fairly comparable between the two groups, both of which are mainly involved in manual labor in the actual handling of merchandise. Pay for both groups is lower than for any of the other four types of employees.

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TABLE 21.--FULL-TIME EMPLOYEES AND FULL-TIME PAY ROLL FOR ONE WEEK ONLY BY OCCUPATIONAL GROUPS FOR THE ELECTRICAL TRADE

(Figures are for week ending October 26, 1935, except where such period was not representative. In such cases, one week of representative employment is given. Establishments which reported irregular employment for occasional months and those having no paid employees, are not included.)

	Total all establishments	Full-service and limited-function wholesalers	Manufacturers' sales branches	Manufacturers' sales offices	Agents
Occupational Group					
Total number of establishments	3,374	2,271	407	250	446
Total number of employees	40,997	30,365	7,691	1,661	1,280
Full-time employees	39,705	29,477	7,522	1,580	1,126
Percent to total employees	96.8	97.1	97.8	95.1	88.0
Part-time employees	1,292	888	169	81	154
Percent to total employees	3.3	2.9	2.2	4.9	12.0
Total pay roll for representative week	$1,495,178	$1,039,824	$335,277	$84,006	$36,071
Full-time pay roll for representative week	$1,476,269	$1,026,612	$333,175	$82,054	$34,428
Percent to total pay roll	98.7	98.7	99.4	97.7	95.4
Part-time pay roll for representative week	$18,909	$13,212	$2,102	$1,952	$1,643
Percent to total pay roll	1.3	1.3	.6	2.3	4.6
Full-time Employees for One Week Only					
All Occupational Groups					
Number of employees	39,705	29,477	7,522	1,580	1,126
Percent to total	100.0	100.0	100.0	100.0	100.0
Pay roll	$1,476,269	$1,026,612	$333,175	$82,054	$34,428
Percent to total	100.0	100.0	100.0	100.0	100.0
Average weekly wage	$37.18	$34.82	$44.29	$51.93	$30.57
Executives and Salaried Corporation Officers					
Number	2,863	2,566	66	42	189
Percent to total	7.2	8.7	.9	2.6	16.8
Pay roll	$238,783	$213,749	$8,341	$4,965	$11,728
Percent to total	16.2	20.8	2.5	6.1	34.1
Office and Clerical Employees					
Number	13,729	9,192	3,465	595	477
Percent to total	34.6	31.2	46.1	37.7	42.4
Pay roll	$381,009	$232,880	$121,984	$16,670	$9,475
Percent to total	25.8	22.7	36.6	20.3	27.5
Average weekly wage	$27.75	$25.33	$35.20	$28.01	$19.86
Inside Selling Employees					
Number	3,360	2,827	399	103	31
Percent to total	8.5	9.6	5.3	6.5	2.7
Pay roll	$106,650	$84,104	$15,793	$5,841	$912
Percent to total	7.2	8.2	4.7	7.1	2.6
Average weekly wage	$31.74	$29.75	$39.58	$56.70	$29.41
Outside Selling Employees					
Number	9,073	5,924	2,087	763	299
Percent to total	22.8	20.1	27.7	48.3	26.5
Pay roll	$479,159	$281,176	$137,582	$50,901	$9,500
Percent to total	32.4	27.4	41.3	62.0	27.6
Average weekly wage	$52.81	$47.46	$65.92	$66.71	$31.77
Warehouse Employees					
Number	5,155	4,303	795	--	57
Percent to total	13.0	14.6	10.6	--	5.1
Pay roll	$121,821	$95,927	$24,833	--	$1,061
Percent to total	8.3	9.3	7.5	--	3.1
Average weekly wage	$23.63	$22.29	$31.23	--	$18.61
Other Employees					
Number	5,525	4,665	710	77	73
Percent to total	13.9	15.8	9.4	4.9	6.5
Pay roll	$148,847	$118,776	$24,642	$3,677	$1,752
Percent to total	10.1	11.6	7.4	4.5	5.1
Average weekly wage	$26.94	$25.46	$34.70	$47.75	$24.00

Executives and salaried corporation officers amounted to only 7.2 percent of total employees but obtained 16.2 percent of the total pay roll. Although an average weekly remuneration can be calculated from the figures, the duties and responsibilities of executives and corporation officers differ so much that an average weekly wage would have very little practical significance. It is sufficient to state that, for each type of operation, this class received the highest compensation. In the case of manufacturers' sales branches (9/10 of 1%) and offices (2.6%), executives and salaried corporation officers accounted for a very small proportion of total employees. This is mainly due to the fact that many manufacturing concerns class the highest ranking person at a sales branch or office as an outside or inside selling employee rather than as an executive; therefore many who, in the case of full-service and limited-function wholesalers, might appear in the executive classifications, are more likely to be listed as outside selling employees. To some extent, this may explain the high remuneration which outside selling employees received in the case of manufacturers' sales branches and offices.

Agents showed 16.8 percent of their employees classified as executives and salaried corporation officers and this group received one-third (34.1%) of total pay roll. The small size of many agents is quite possibly the major factor here. A number of concerns operate with one or two executives and a few clerical workers. Full-service and limited-function wholesalers, with one out of every twelve (8.7%) employees in the executive and corporation officer class and this group receiving one-fifth (20.8%) of total pay roll, are probably the most representative. The extremes are caused more by differences in corporate and business organization than by any variation in personnel and its functions.

Throughout the detailed analysis of employment and full-time pay roll, agents pay the lowest wages, full-service and limited-function wholesalers compensate their employees somewhat better, while manufacturers' sales branches and offices pay consistently higher weekly wages. This emphasizes the thought that manufacturers found it most efficient to hire skilled and expert employees in the selling of their products through controlled sales branches and offices. Manufacturers' sales branches and offices, in addition, tend to specialize in apparatus and equipment, which are technical lines frequently requiring personnel with engineering training. Moreover, certain classes such as outside salesmen are somewhat affected by the business structures of a particular concern; therefore any conclusion that one type pays more for identical work than another type seems not to be warranted.

BUSINESS-SIZE GROUPS. The detailed information about employment and pay roll is broken down by business size groups in Table 22 for full-line wholesale merchants. In the case of executives and corporation officers, their number and remuneration becomes a smaller proportion of the total as the business-size groups become larger. The same general picture holds true for outside selling employees, although it should be noted in both cases that the weekly wage per employee increases as the volume of business expands from one size group to the next. Office and clerical employees rise from one-quarter of total employees for houses doing a business between $100,000 and $200,000 to about two-fifths of the total for the largest houses. The compensation of this group also rises from about one-fifth of total pay roll to over one-quarter as size increases, although average weekly wages remain about the same.

The relative number and pay roll of inside selling employees shows no distinctive trends between the size groups, although weekly remuneration is slightly higher in the larger divisions. Warehouse employees account for about one-fifth of total workers and one-seventh of pay roll for all size groups with a tendency to assume greater importance for the two middle size groups ($200,000 to $500,000 and $500,000 to $1,000,000). "Other" employees are relatively more numerous (10.5%) for the smallest size group than for the other three (3.3% to 5.4%). As "other" employees are paid about equally in each size group, the same ratios exist with respect to pay roll. Since a number of the smaller houses have employees whose functions are numerous (inside selling, warehousing, delivering, etc.) there is a tendency in this size group to swell the number of "other" employees. An examination of warehouse and "other" employees combined indicates a decline in relative importance as the larger business size groups are reached, indicating certain economies as the volume of the house increases.

The ratio which total pay roll bears to net sales decreases as the size of the business house becomes larger, as shown in Table 32, from 8.8 percent of sales for the $100,000 to $200,000 size group to 7.5 percent for establishments whose business exceeds $2,000,000 annually. This reflects some economies of large size, indicating that the lower cost per dollar of sales for executives, outside salesmen, and "other" employees is not entirely offset by rising clerical and office employee costs.

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TABLE 22.-- OCCUPATIONAL EMPLOYMENT BY BUSINESS-SIZE GROUPS

Number and Pay Roll of Full-Time Employees of 295 Wholesale Merchants For One Week Only

(Figures are for week ending October 26, 1935, except where such period was not representative. In such cases, one week of representative employment is given. Establishments which reported irregular employment for occasional months and those having no paid employees, are not included.)

	Total all establishments	$100,000 to $199,999	$200,000 to $499,999	$500,000 to $999,999	$1,000,000 and over
Number of establishments	295	69	131	57	38
Full-time employees	6,929	531	1,704	1,836	2,858
Percent to total		100.0	100.0	100.0	100.0
Full-time pay roll	$238,779	$16,491	$57,938	$63,601	$100,749
Percent to total		100.0	100.0	100.0	100.0
Average weekly wage	$34.46	$31.05	$34.00	$34.64	$35.25
Executives and salaried corporation officers					
Number	527	54	162	139	172
Percent to total	7.6	10.2	9.5	7.6	6.0
Pay roll	$48,105	$3,644	$12,879	$12,876	$18,706
Percent to total	20.1	22.1	22.2	20.3	18.6
Office and clerical employees					
Number	2,528	135	548	757	1,088
Percent to total	36.5	25.4	32.1	41.2	38.0
Pay roll	$62,539	$3,235	$13,429	$18,014	$27,861
Percent to total	26.2	19.6	23.2	28.3	27.6
Average weekly wage	$24.74	$23.96	$24.50	$23.79	$25.60
Inside selling employees					
Number	551	44	97	115	295
Percent to total	8.0	8.3	5.7	6.3	10.3
Pay roll	$18,836	$1,099	$2,974	$4,058	$10,705
Percent to total	7.9	6.7	5.1	6.4	10.6
Average weekly wage	$34.19	$24.97	$30.65	$35.28	$36.28
Outside selling employees					
Number	1,586	137	435	387	627
Percent to total	22.9	25.8	25.5	21.1	22.0
Pay roll	$67,666	$4,983	$17,950	$17,689	$27,044
Percent to total	28.3	30.2	31.0	27.8	26.8
Average weekly wage	$42.66	$36.37	$41.26	$45.70	$43.13
Warehouse employees					
Number	1,387	105	384	378	520
Percent to total	20.0	19.8	22.5	20.6	18.2
Pay roll	$33,333	$2,235	$8,719	$9,630	$12,749
Percent to total	14.0	13.5	15.0	15.1	12.6
Average weekly wage	$24.03	$21.28	$22.70	$25.47	$24.51
Other employees					
Number	350	56	78	60	156
Percent to total	5.0	10.5	4.6	3.3	5.4
Pay roll	$8,300	$1,295	$1,987	$1,334	$3,684
Percent to total	3.5	7.8	3.4	2.1	3.6
Average weekly wage	$23.71	$23.12	$25.47	$22.23	$23.61

Credit Sales

On the wholesale schedule, each establishment was requested to report that part of its total business which was done on a credit basis; i. e., sales made on weekly terms, 10-day basis, 30-day basis, and end-of-month terms, sales on the installment plan, or on any other basis that did not involve the immediate payment of cash on the receipt of goods. C. O. D. and similar sales were classed as cash sales. The term "credit sales," therefore, includes all sales made on any basis other than strictly cash.

Some establishments were unable to report the proportion of their total sales which were done on credit. Similarly, the information turned in by a few establishments was not in usable form. Nor could a distinction be made between those doing no credit business and those selling on credit but failing to report. Of the 2,438 full-service and limited-function wholesalers in the electrical trade, 2,073 reported credit sales, while 365 fell into one of the three classifications already noted. In Table 23 and 24, the total number and net sales for all establishments are given as well as the data for those establishments which reported credit sales. In this way, it is possible to determine the adequacy of the sample which is analyzed. It should not be assumed, in any case, that all of the firms not reporting credit sales sold strictly for cash. Rather, in the electrical trade, there is every reason to believe that a strictly cash business is rare.

Summary of Credit Sales.-For establishments which operated upon a credit basis, credit sales amounted to 85.0 percent of total sales in the case of full-service and limited-function wholesalers and 96.4 percent for manufacturers' sales branches. This clearly indicates, as shown in Tables 23 and 24, that the wholesale selling of electrical merchandise is substantially a credit business. This is further demonstrated when the geographic divisions are examined individually. In no case do the credit sales of electrical goods drop below 77 percent (West South Central, 77.4 percent) for full-service and limited-function wholesalers, while the high is found at 90 percent (Mountain, 89.7 percent). The differences between the geographic divisions are indicative of some variation in business practice, although full-service and limited-function wholesalers do a little over four-fifths of their total business on credit.

TABLE 23.--CREDIT SALES, FULL-SERVICE AND LIMITED-FUNCTION WHOLESALERS AND MANUFACTURERS' SALES BRANCHES (WITH STOCKS) BY LINES OF MERCHANDISE

(All values are expressed in thousands of dollars)

Kind of business and type of operation	Total number of establishments	Total net sales	Establishments reporting credit sales			
			Number of establishments	Net sales	Amount of credit	% of credit to sales of establishments reporting credit
Total	2,866	$926,361	2,426	$764,290	$676,750	79.2
Full-service and limited-function wholesalers	2,438	576,542	2,073	525,313	446,419	85.0
Electrical merchandise (full line)	419	184,233	408	173,895	160,127	92.1
Apparatus & equipment	199	20,931	146	17,815	15,309	85.9
Wiring supplies and construction material	734	76,859	633	69,029	60,564	87.9
Radios and equipment	554	123,708	454	114,621	101,047	87.2
Refrigerators & equipment	309	146,109	264	129,915	93,129	71.7
Other appliances and specialties	223	24,702	168	20,038	16,243	81.1
Manufacturers' sales branches (with stocks)	428	349,819	353	238,977	230,331	96.4
Electrical merchandise (full line)	28	62,476	28	62,476	57,447	92.0
Apparatus & equipment	176	216,106	122	111,645	108,617	97.3
Wiring supplies and construction material	60	54,135	53	51,555	51,265	99.4
Radios and equipment	7	1,064	5	785	785	100.0
Refrigerators & equipment	84	8,645	80	5,187	5,037	97.1
Other appliances and specialties	73	7,393	65	7,329	7,180	98.0

Turning to manufacturers' sales branches an even smaller geographic variation is found. The 7 branches reporting in the East South Central made all of their sales on a credit basis, while the low point was reached by the West South Central division where the credit business of the 25 reporting sales branches was 93.4 percent of the total. In general, therefore, manufacturers' sales branches in the electrical trade do about nineteen-twentieths or substantially all of their business on credit, this proportion being somewhat above that for full-service and limited-function wholesalers.

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TABLE 24.--CREDIT SALES, FULL-SERVICE AND LIMITED-FUNCTION WHOLESALERS AND MANUFACTURERS' SALES BRANCHES BY GEOGRAPHIC DIVISIONS AND CITIES WITH A POPULATION OF OVER 500,000

(all values are expressed in thousands of dollars)

Division and Type of Operation	All establishments			Establishments reporting credit sales				
	Number	Net sales	Total expenses % to net sales	Number	Net sales	Total expenses % to net sales	Credit sales	% of credit sales to net sales
United States Total								
Full-service and limited-function wholesalers	2,438	$576,542	17.3	2,073	$525,313	17.2	$446,419	85.0
Manufacturers' sales branches	428	349,819	9.1	353	238,977	10.8	230,331	96.4
New England								
Full-service and limited-function wholesalers	195	34,008	18.0	176	31,604	17.5	26,681	84.4
Manufacturers' sales branches	28	25,636	8.6	23	15,267	11.3	14,618	95.7
Middle Atlantic								
Full-service and limited-function wholesalers	729	191,295	17.7	608	169,531	17.7	150,610	88.8
Manufacturers' sales branches	88	110,516	8.7	66	76,606	9.7	73,673	96.2
East North Central								
Full-service and limited-function wholesalers	535	129,400	17.9	437	116,145	17.8	94,666	81.5
Manufacturers' sales branches	111	100,929	9.5	92	75,805	10.5	74,227	97.9
West North Central								
Full-service and limited-function wholesalers	209	50,372	17.9	174	46,627	17.7	38,472	82.5
Manufacturers' sales branches	43	30,194	8.8	36	18,231	12.1	17,240	94.6
South Atlantic								
Full-service and limited-function wholesalers	226	52,333	15.8	195	48,064	15.7	42,447	88.3
Manufacturers' sales branches	44	24,227	8.5	39	12,437	13.6	11,909	95.8
East South Central								
Full-service and limited-function wholesalers	65	13,026	15.8	61	12,609	16.0	9,801	77.7
Manufacturers' sales branches	8	1,175	11.8	x	x	31.8	x	100.0
West South Central								
Full-service and limited-function wholesalers	118	28,356	16.3	108	27,147	16.2	21,009	77.4
Manufacturers' sales branches	29	12,010	10.2	25	7,959	13.4	7,436	93.4
Mountain								
Full-service and limited-function wholesalers	58	11,733	16.7	48	9,992	16.8	8,963	89.7
Manufacturers' sales branches	15	10,481	6.6	x	x	8.4	x	97.7
Pacific								
Full-service and limited-function wholesalers	303	66,019	15.9	266	63,594	15.7	53,770	84.6
Manufacturers' sales branches	62	34,651	9.9	51	25,081	11.8	23,804	94.9

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TABLE 24.--CREDIT SALES, FULL-SERVICE AND LIMITED-FUNCTION WHOLESALERS AND MANUFACTURERS' SALES BRANCHES BY GEOGRAPHIC DIVISIONS AND CITIES WITH A POPULATION OF OVER 500,000

(all values are expressed in thousands of dollars)

Cities and Type of Operation	All establishments			Establishments reporting credit sales				
	Number	Net sales	Total expenses % to net sales	Number	Net sales	Total expenses % to net sales	Credit sales	% of credit sales to net sales
Total, 13 cities								
Full-service and limited-function wholesalers	1,027	$301,982	17.5	841	$269,141	17.5	$233,137	86.6
Manufacturers' sales branches	226	244,390	9.5	181	182,676	10.4	176,529	96.6
Baltimore								
Full-service and limited-function wholesalers	32	7,038	17.3	21	5,436	18.2	4,925	90.6
Manufacturers' sales branches	4	580	21.7	4	580	21.7	578	99.7
Boston								
Full-service and limited-function wholesalers	51	15,986	18.2	48	15,255	18.3	12,639	82.9
Manufacturers' sales branches	17	15,759	10.8	x	x	11.0	x	95.7
Buffalo								
Full-service and limited-function wholesalers	21	5,034	19.2	19	4,943	19.0	4,182	84.6
Manufacturers' sales branches	7	7,343	8.7	x	x	8.3	x	92.1
Chicago								
Full-service and limited-function wholesalers	138	34,937	18.4	105	27,862	18.9	22,317	80.1
Manufacturers' sales branches	43	51,381	10.4	36	40,306	11.1	39,745	98.6
Cleveland								
Full-service and limited-function wholesalers	43	10,856	20.3	35	10,124	20.5	8,899	87.9
Manufacturers' sales branches	13	14,183	10.2	x	x	13.2	x	94.5
Detroit								
Full-service and limited-function wholesalers	45	16,299	15.8	41	15,936	15.8	13,703	86.0
Manufacturers' sales branches	19	24,506	6.4	14	18,803	5.9	18,621	99.0
Los Angeles								
Full-service and limited-function wholesalers	94	22,526	16.3	78	21,648	16.0	15,236	70.4
Manufacturers' eales branches	19	8,494	11.0	15	5,546	13.4	5,436	98.0
Milwaukee								
Full-service and limited-function wholesalers	31	7,961	15.7	24	7,195	15.6	6,572	91.3
Manufacturers' sales branches	8	3,689	13.3	5	2,116	18.7	2,023	95.6
New York City								
Full-service and limited-function wholesalers	371	78,100	18.6	306	62,103	19.4	51,769	83.4
Manufacturers' sales branches	36	50,841	9.1	27	29,726	10.5	29,226	98.3
Philadelphia								
Full-service and limited-function wholesalers	75	59,442	16.1	63	57,289	15.7	55,813	97.4
Manufacturers' sales branches	18	28,891	9.9	13	21,831	11.4	21,133	96.8
Pittsburgh								
Full-service and limited-function wholesalers	26	11,329	16.6	21	10,955	16.7	9,998	91.3
Manufacturers' sales branches	12	17,579	6.2	x	x	6.3	x	93.9
St. Louis								
Full-service and limited-function wholesalers	39	13,578	20.5	28	11,843	20.8	9,199	77.7
Manufacturers' sales branches	13	11,203	10.3	10	6,489	15.1	5,934	91.4
San Francisco								
Full-service and limited-function wholesalers	61	18,896	14.8	52	18,552	14.3	17,885	96.4
Manufacturers' sales branches	17	9,941	11.7	14	9,119	12.0	8,410	92.2

X - Figures withheld to avoid disclosure of individual operations.

Turning to the 13 citiee with a 1930 population of over 500,000, it is found that the credit sales of full-service and limited-function wholesalers are 86.6 percent of their total ealee. This is slightly more (1.6 percent greater) than their average credit sales (85.0%) for the country as a whole. In the case of manufacturere' eales branchee, the increase of credit ealee in the citiee as compared with the entire country ie very amall (96.4 percent compared to 96.6 percent). Between the citiee, there was eome variation in the credit sales of full-service and limited-function wholesalers; the lowest city (Los Angeles) had credit sales of 70.4 percent of the total, while the higheet (Philadelphia) had credit sales amounting to 97.4 percent of the total. On the whole, however, credit salee run consietently large for full-eervice and limited-function wholesalere. In the caee of manufacturere' salee branches, an even smaller divergence is noticeable between the large cities and the whole country.

In Table 24 the percentage which total expenees bear to net salee is aleo given both for all eetablishments and for those reporting credit ealee. Theee expense ratioe are ueeful in indicating whether it wae the high or low cost operators who were able to eegregate the ehare of their ealee done on credit. There is no justification for assuming that all of the concerns not reporting credit operated upon a caeh baeie.

Distribution of Wholesalers' Sales

Of the 3,767 electrical establishments in the United States, 3,184 were able to allocate their sales to the various distributive channels which were listsd on the wholesale schedule. These establishments which reported distribution of sales did over nine-tenths (92.2%) of the electrical business. The lowest proportion of satisfactory reports was received from agents and, even here, 88.3 percent of total sales were distributsd. When the various geographic divisions of the country and the 13 largest cities are considered, it is found that, with very minor exceptions, over four-fifths of the total business is allocated to distributive channels.

Of the total distributed sales for the United States, 48.1 percent was made to industrial users (See Table 25). Sales to retailers were sscond in importance and accounted for 34.7 percent of the total, while sales to other wholesalsrs were relatively smaller and amounted to 13.4 percent of distributed sales. Sales to household consumers (1.8%) and export sales (2.0%) were insignificant. These totals, however interesting, are much more significant when they are analyzed according to types of operation and the major lines of merchandise handled. Full-ssrvice and limited-function wholesalers disposed of the bulk of their merchandise (54.8%) to retailsrs and also sold substantial quantities (25.8%) to industrial users. Sales to other wholssalers accounted for less than one-seventh (13.5%) of their distributed sales while household consumers with 2.9 percent of the total and export sales with 3.0 percent were very minor outlets. In each geographic division, merchant wholesalers sold mors to retailers than through any other distributive channsl. For 8 of the 9 geographic divisions, sales to retailers accounted for one-half of the business of full-service and limited-function wholesalers and reached a high of 73.2 percent of distributed salss in the West South Central division. Only in the Middle Atlantic States did sales to retailers amount to less than ons-half of the total. In this geographic division, sales to retailers accounted for 40.2 percent and were still the singls most important channel of distribution, since sales to other wholesalers, which ranked second, accounted for 24.6 percent of distributed sales. In evsry geographic division, full-service and limitsd-function wholesalers find retailers their largest market.

For the country as a whole, manufacturers' sales branches dispossd of almost three-fourths (73.8%) of their sales to industrial consumers. One-seventh (14.1%) went to retailers and one-tenth to other wholesalers (11.0%). Salss to household consumers and for export were negligible. This division of sales is consistent through the major geographic arsas of the country. The distributed sales of manufacturers' salss branches to industrial consumers reached a high of 85.7 percent in the Mountain States and a low of 64.5 percent in the Pacific States. Sales to retailers show more variation, reaching a peak of one-fifth of total sales (19.6%) in the West South-Central division and shrinking to only 0.4 of one percent in the East South-Central States. Outside of these extremes, however, sales to retailers are fairly well pictured by ths 14.1 percent share for the country as a whols. Manufactursrs' sales branches find industrial users to be their major customers and dispose of about five times as much merchandise to them as to retailers, the second most important customer class.

Manufacturers' sales offices disposed of 78.8 percent, over three-fourths, of their distributed sales to industrial users. Ths second most important channel was sales to wholesalers which amounted to 13.4 percent of the total or less than one-seventh. Sales to retailers were small and amounted to 6.1 percent of distributsd salss while, as in the case of manufacturers' sales branches, the amounts of merchandise going to household consumsrs (1/10 of 1%) and for export (1.6%) were insignificant. The share of distributed sales to industrial users varies from a low of 69.3 percent in the Pacific States to a high of 97.7 percent for New England. Thsre is, howevsr, a consistency in the various geographic divisions which clsarly demonstrates the fact that sales to industrial users are the outstandingly important outlet for manufacturers' sales offices.

The distributed sales of agents show that industrial users and wholesalers were their most important customers. Sales to industrial users accounted for 42.9 percent of distributed sales and those to wholesalers for 32.0 percent. Sales to retailers wers also of some significance and accounted for one-fifth (20.0%) of the total. Sales to household consumers (3/10 of 1%) were very minor while export sales totaled 4.8 percent of distributsd sales. Sales to industrial users were fairly consistent between the geographic divisions except for the Mountain States (21.1%) and the East South-Central States (76.7%). Similarly, sales to wholesalers ranked second and sales to industrial users third except in the West North-Central States, in the Mountain division and the Pacific coast. The distributed sales of agents to retailers disappeared in the East South-Central States, and reached a peak of 27.4 percent in New England. In spits of this variation, sales to retailers wsre clsarly a secondary distributive channel for agents and brokers.

For all four types of operation, export salss were relatively insignificant. Such sales were largest, however, for agents in the Middle Atlantic States. In this division, one-eighth (12.9%) of the distributed sales of agsnts were export sales. An examination of the second part of Table 25 indicates that these export sales took place largsly in Nsw York City.

A comparison of the figures for the geographic divisions and for the 13 cities with a population of over 500,000 each shows that the cities, the geographic divisions, and the nation as a whole, diffsr surprisingly littls in the manner in which electrical wholssalers disposed of their merchandise. In these citiss, slightly less was sold to retailers (30.0%) than in the country as a whols (34.7%) and this drop was caused by city full-service and limited-function wholesalsrs disposing of only 47.5 percent of their distributed sales to retailsrs while, for the country as a whole, they sold 54.8 percent to retailers. In the cities, likewise, it is found that a slightly higher proportion of distributed sales (15.8%) goes to other wholesalers than is true for the entire country (13.4%). This rise is mainly dus to the full-service and limited-function wholesalers selling 17.9 percent of their distributed salss to other wholesalers while ths percentage for the country is 13.5 percent.

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TABLE 25.--SALES BY CLASSES OF CUSTOMERS BY TYPES OF OPERATION FOR GEOGRAPHIC DIVISIONS AND CITIES

(all values are expressed in thousands of dollars)

Geographic Divisions	All Establishments		Establishments Reporting Distributed Sales			Distributed Sales				
				Net Sales						
	Number	Net Sales	Number	Amount	% of sales of all estab.	% to Retailers	% to Household Consumers	% to Industrial users	% to Wholesalers	% Export-sales
UNITED STATES TOTAL	3,767	$1,109,404	3,184	$1,023,095	92.2	34.7	1.8	48.1	13.4	2.0
Full-Service and Limited-Function Wholesalers	2,438	576,542	2,118	535,414	92.9	54.8	2.9	25.8	13.5	3.0
Manufacturers' Sales Branches	428	349,819	298	320,835	91.7	14.1	.8	73.8	11.0	.3
Manufacturers' Sales Offices	263	137,180	210	126,334	92.1	6.1	.1	78.8	13.4	1.6
Agents	638	45,863	558	40,512	88.3	20.0	.3	42.9	32.0	4.8
NEW ENGLAND	270	65,936	229	61,699	93.6	34.4	1.7	57.4	6.5	--
Full-Service and Limited-Function Wholesalers	195	x	167	31,396	x	58.0	2.7	37.9	1.4	--
Manufacturers' Sales Branches	28	x	19	24,552	x	9.7	.9	78.0	11.4	--
Manufacturers' Sales Offices	9	x	7	3,653	x	.9	--	97.7	1.4	--
Agents	38	x	36	2,098	x	27.4	--	39.2	33.4	--
MIDDLE ATLANTIC	1,083	367,185	899	341,549	93.0	28.8	2.2	44.6	18.6	5.8
Full-Service and Limited-Function Wholesalers	729	191,295	614	181,157	94.7	40.2	3.8	23.0	24.6	8.4
Manufacturers' Sales Branches	88	110,516	66	102,380	92.6	17.1	.6	72.4	9.2	.7
Manufacturers' Sales Offices	77	x	58	43,594	x	9.7	--	70.6	15.2	4.6
Agents	189	x	161	14,418	x	24.6	.6	40.4	21.5	12.9
EAST NORTH CENTRAL	871	293,055	745	264,938	90.4	30.0	1.2	55.3	13.4	.1
Full-Service and Limited-Function Wholesalers	535	129,400	476	119,825	92.6	54.1	2.3	28.5	15.0	.1
Manufacturers' Sales Branches	111	100,929	80	86,776	86.0	12.1	.5	72.2	11.1	.1
Manufacturers' Sales Offices	80	x	65	47,891	x	5.0	--	85.2	9.7	.1
Agents	145	11,913	124	10,446	87.7	17.0	--	50.8	31.8	.4
WEST NORTH CENTRAL	345	87,305	294	80,426	92.1	46.2	1.3	43.8	8.7	--
Full-Service and Limited-Function Wholesalers	209	x	184	45,996	x	70.7	2.2	24.4	2.7	--
Manufacturers' Sales Branches	43	30,194	34	28,243	93.5	14.3	.2	71.5	14.0	--
Manufacturers' Sales Offices	26	x	19	2,793	x	12.3	--	80.5	7.2	--
Agents	67	3,626	57	3,394	93.6	7.3	--	44.9	47.7	.1
SOUTH ATLANTIC	327	95,007	270	87,087	91.7	40.8	1.2	49.4	8.6	--
Full-Service and Limited-Function Wholesalers	226	52,333	194	46,387	88.6	70.5	2.1	25.0	2.4	--
Manufacturers' Sales Branches	44	24,227	25	23,018	95.0	8.7	--	80.6	10.7	--
Manufacturers' Sales Offices	25	15,518	22	15,117	97.4	2.7	.1	76.7	20.5	--
Agents	32	2,929	29	2,565	87.6	17.9	.3	50.5	31.3	--
EAST SOUTH CENTRAL	92	22,678	82	22,288	98.3	38.5	1.8	51.4	8.3	--
Full-Service and Limited-Function Wholesalers	65	x	63	12,726	x	66.5	3.1	28.7	1.7	--
Manufacturers' Sales Branches	8	1,175	3	1,134	96.5	.4	.2	83.4	16.0	--
Manufacturers' Sales Offices	12	x	12	x	x	x	--	x	x	--
Agents	7	x	4	258	84.0	--	--	76.7	23.3	--
WEST SOUTH CENTRAL	181	43,844	151	41,527	94.7	52.7	2.6	38.2	6.3	.2
Full-Service and Limited-Function Wholesalers	118	28,356	101	26,631	93.9	73.2	3.9	21.9	.8	.2
Manufacturers' Sales Branches	29	x	16	11,418	x	19.6	.1	66.0	14.3	--
Manufacturers' Sales Offices	12	x	12	x	x	x	--	x	x	--
Agents	22	x	22	x	x	x	x	x	x	x
MOUNTAIN	91	24,130	76	21,505	89.1	33.0	1.7	58.1	7.1	.1
Full-Service and Limited-Function Wholesalers	58	x	50	9,579	x	65.0	3.5	30.1	1.4	--
Manufacturers' Sales Branches	15	10,481	10	10,260	97.9	7.3	--	85.7	7.0	--
Manufacturers' Sales Offices	5	960	5	960	100.0	4.1	3.6	68.3	24.0	--
Agents	13	956	11	706	73.8	12.3	--	21.1	63.0	3.6
PACIFIC	507	110,264	438	102,076	92.6	44.8	2.6	38.6	13.5	.5
Full-Service and Limited-Function Wholesalers	303	66,019	269	61,717	93.5	62.3	2.3	24.4	10.3	.7
Manufacturers' Sales Branches	62	34,651	45	33,054	95.4	17.8	3.8	64.5	13.9	--
Manufacturers' Sales Offices	17	3,099	10	2,157	69.6	6.5	--	69.3	24.2	--
Agents	125	6,495	114	5,148	79.3	25.1	.2	29.7	45.0	--

X - Figures withheld to avoid disclosure of individual operations.

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TABLE 25.--SALES BY CLASSES OF CUSTOMERS BY TYPES OF OPERATION FOR GEOGRAPHIC DIVISIONS AND CITIES

(all values are expressed in thousands of dollars)

CITIES	All Establishments		Establishments Reporting Distributed Sales			Distributed Sales				
				Net Sales						
	Number	Net Sales	Number	Amount	% of sales of all estab.	% to Retailers	% to Household Consumers	% to Industrial users	% to Wholesalers	% Export-sales
TOTAL, 13 CITIES	1,822	$653,436	1,543	$597,377	91.4	30.0	1.7	49.1	15.8	3.4
Full-Service and Limited-Function Wholesalers	1,027	301,982	898	283,500	93.9	47.5	3.1	25.9	17.9	5.6
Manufacturers' Sales Branches	226	244,390	172	220,580	90.3	15.5	.5	72.3	11.4	.3
Manufacturers' Sales Offices	138	72,232	98	62,442	86.4	5.8	--	76.1	14.9	3.2
Agents	431	34,832	375	30,855	88.6	22.2	.3	40.9	30.4	6.2
BALTIMORE, MD.	44	13,243	36	12,261	92.6	34.4	.7	52.0	12.9	--
Full-Service and Limited-Function Wholesalers	32	7,038	25	6,061	86.0	--	--	--	--	--
Manufacturers' Sales Branches	4	580	3	575	99.0	--	--	--	--	--
Manufacturers' Sales Offices	5	x	5	x	x	x	--	x	x	--
Agents	3	x	3	x	x	x	--	x	--	--
BOSTON, MASS.	107	36,065	97	34,070	94.5	35.6	.9	52.7	10.8	--
Full-Service and Limited-Function Wholesalers	51	15,986	47	15,117	95.0	--	--	--	--	--
Manufacturers' Sales Branches	17	15,759	13	15,131	96.0	--	--	--	--	--
Manufacturers' Sales Offices	7	2,012	6	1,832	91.0	--	--	100.0	--	--
Agents	32	x	31	1,990	x	--	--	--	--	--
BUFFALO, N. Y.	36	13,486	31	12,849	95.3	34.6	1.6	56.6	7.2	--
Full-Service and Limited-Function Wholesalers	21	5,034	19	4,821	96.0	--	--	--	--	--
Manufacturers' Sales Branches	7	7,343	6	7,158	97.0	--	--	--	--	--
Manufacturers' Sales Offices	5	760	4	525	69.0	--	--	--	--	--
Agents	3	x	2	x	--	--	--	--	--	--
CHICAGO, ILL.	255	98,188	221	84,877	86.4	29.9	1.5	56.0	12.4	.2
Full-Service and Limited-Function Wholesalers	138	34,937	128	32,486	93.0	--	--	--	--	--
Manufacturers' Sales Branches	43	x	31	43,216	x	--	--	--	--	--
Manufacturers' Sales Offices	17	x	13	3,302	x	--	--	--	--	--
Agents	57	x	49	5,873	x	--	--	--	--	--
CLEVELAND, OHIO	96	31,252	79	28,552	91.4	32.3	2.1	55.5	10.0	--
Full-Service and Limited-Function Wholesalers	43	10,856	39	9,953	92.0	--	--	--	--	--
Manufacturers' Sales Branches	13	14,183	10	13,035	92.0	--	--	--	--	--
Manufacturers' Sales Offices	14	4,622	11	4,543	98.0	--	--	--	--	--
Agents	26	1,591	19	1,021	64.0	--	--	--	--	--
DETROIT, MICH.	89	50,817	74	46,217	90.9	22.8	1.1	69.3	6.8	--
Full-Service and Limited-Function Wholesalers	45	16,299	39	15,407	95.0	--	--	--	--	--
Manufacturers' Sales Branches	19	24,506	13	21,167	86.0	--	--	--	--	--
Manufacturers' Sales Offices	12	8,255	9	7,886	96.0	--	--	--	--	--
Agents	13	x	13	x	x	x	--	x	x	--
LOS ANGELES, CALIF.	169	35,529	150	33,051	93.0	50.8	2.0	35.6	11.4	.2
Full-Service and Limited-Function Wholesalers	94	22,526	86	21,451	95.0	--	--	--	--	--
Manufacturers' Sales Branches	19	8,494	14	7,888	93.0	--	--	--	--	--
Manufacturers' Sales Offices	7	1,810	5	1,553	86.0	--	--	--	--	--
Agents	49	2,699	45	2,159	80.0	--	--	--	--	--

(continued)

Census of Business: 1935

TABLE 25.--SALES BY CLASSES OF CUSTOMERS
BY TYPES OF OPERATION FOR GEOGRAPHIC DIVISIONS AND CITIES

(all values are expressed in thousands of dollars)

CITIES	All Establishments		Establishments Reporting Distributed Sales			Distributed Sales				
				Net Sales						
	Number	Net Sales	Number	Amount	% of sales of all estab.	% to Retailers	% to Household Consumers	% to Industrial users	% to Wholesalers	% Export-sales
MILWAUKEE, WIS.	53	$14,208	46	$12,727	89.6	42.5	.2	52.1	5.1	.1
Full-Service and Limited-Function Wholesalers	31	7,961	27	7,136	90.0	--	--	--	--	--
Manufacturers' Sales Branches	8	x	7	3,211	x	--	--	--	--	--
Manufacturers' Sales Offices	4	2,131	2	1,953	x	--	--	--	--	--
Agents	10	427	10	427	100.0	--	--	--	--	--
NEW YORK, N. Y.	566	171,612	479	156,134	91.0	28.8	2.5	44.6	11.4	12.7
Full-Service and Limited-Function Wholesalers	371	78,100	313	71,662	92.0	43.3	4.8	20.1	10.5	21.3
Manufacturers' Sales Branches	36	50,841	30	47,060	93.0	21.6	.9	69.8	6.2	1.5
Manufacturers' Sales Offices	27	30,861	19	26,335	85.0	3.1	--	70.4	19.0	7.5
Agents	132	11,810	117	11,077	94.0	27.0	.6	34.4	21.2	16.8
PHILADELPHIA, PA.	131	96,220	105	92,240	95.9	15.3	.9	43.1	40.7	--
Full-Service and Limited-Function Wholesalers	75	59,442	62	58,561	99.0	16.5	1.3	24.7	57.5	--
Manufacturers' Sales Branches	18	28,891	13	26,469	92.0	13.4	.3	75.0	11.3	--
Manufacturers' Sales Offices	14	6,066	12	5,552	92.0	9.7	--	78.0	12.1	.2
Agents	24	1,821	18	1,658	91.0	18.1	.3	66.8	14.8	--
PITTSBURGH, PA.	67	33,584	50	31,041	89.5	31.6	2.0	58.6	7.8	--
Full-Service and Limited-Function Wholesalers	26	11,329	21	10,864	96.0	67.3	5.6	25.6	1.5	--
Manufacturers' Sales Branches	12	x	9	16,361	x	13.3	.1	75.0	11.6	--
Manufacturers' Sales Offices	12	3,513	8	3,016	86.0	4.6	--	91.9	3.5	--
Agents	17	1,163	12	800	69.0	21.9	--	45.4	32.7	--
ST. LOUIS, MO.	85	26,991	65	22,991	85.2	41.4	1.7	45.5	11.4	--
Full-Service and Limited-Function Wholesalers	39	13,578	34	11,400	84.0	68.9	3.2	25.1	2.8	--
Manufacturers' Sales Branches	13	11,203	10	9,916	89.0	16.0	.2	69.1	14.7	--
Manufacturers' Sales Offices	8	x	2	87	x	--	--	100.0	--	--
Agents	25	1,751	19	1,588	91.0	4.7	--	41.4	53.6	.3
SAN FRANCISCO, CALIF.	124	32,241	110	30,367	94.2	42.0	1.2	31.9	23.6	1.3
Full-Service and Limited-Function Wholesalers	61	18,896	58	18,581	98.0	54.6	1.9	18.5	22.9	2.1
Manufacturers' Sales Branches	17	9,941	13	9,393	94.0	17.3	--	62.6	20.1	--
Manufacturers' Sales Offices	6	727	2	310	43.0	86.5	--	13.5	--	--
Agents	40	2,677	37	2,083	78.0	34.0	.3	16.1	49.5	.1

TABLE 26.--SALES BY CLASSES OF CUSTOMERS LINES OF MERCHANDISE AND TYPES OF OPERATION

(all values are expressed in thousands of dollars)

Kind of Business / Type of Operation	All Establishments		Establishments Reporting Distributed Sales			Distributed Sales											
				Net Sales		Total		To Retailers		To Household Consumers		To Industrial Users		To Wholesalers		Export Sales	
	Number	Net Sales	Number	Amount	% to sales of all estab.	Amount	% to total	Amount	% to total	Amount	% to total	Amount	% to total	Amount	% to total	Amount	% to total
Full-Line	478	$279,322	456	$267,084	95.6	$267,084	100.0	$88,343	33.1	$2,061	.8	$148,994	55.8	$27,554	10.3	$132	--
Full-service & limited-function wholesalers	419	184,233	404	175,677	95.4	175,677	100.0	88,160	50.2	2,049	1.2	82,685	47.0	2,651	1.5	132	.1
Manufacturers' sales branches	28	62,476	28	62,476	100.0	62,476	100.0	--	--	--	--	45,116	72.2	17,360	27.8	--	--
Manufacturers' sales offices	24	31,344	21	28,106	89.7	28,106	100.0	--	--	--	--	20,613	73.3	7,493	26.7	--	--
Agents	7	1,269	3	825	65.0	825	100.0	183	22.2	12	1.4	580	70.3	50	6.1	--	--
Apparatus and Equipment	667	296,253	463	260,628	88.0	260,628	100.0	12,708	4.9	1,695	.7	223,486	85.7	16,512	6.3	6,227	2.4
Full-service & limited-function wholesalers	199	20,931	133	16,907	80.8	16,907	100.0	4,521	26.7	367	2.2	5,292	31.3	1,233	7.3	5,494	32.5
Manufacturers' sales branches	176	216,106	98	190,907	88.3	190,907	100.0	3,892	2.0	1,324	.7	173,582	90.9	11,391	6.0	718	.4
Manufacturers' sales offices	144	49,849	104	44,715	89.7	44,715	100.0	3,175	7.1	--	--	38,512	86.1	3,013	6.7	15	.1
Agents	148	9,367	128	8,099	86.5	8,099	100.0	1,120	13.8	4	.1	6,100	75.3	875	10.8	--	--
Wiring Supplies and Construction Materials	1,090	191,467	954	174,736	91.3	174,736	100.0	68,155	39.0	1,152	.7	78,318	44.8	24,420	14.0	2,691	1.5
Full-service & limited-function wholesalers	734	76,859	641	68,784	89.5	68,784	100.0	33,006	48.0	1,089	1.6	27,529	40.0	6,944	10.1	216	.3
Manufacturers' sales branches	60	54,135	55	53,365	98.6	53,365	100.0	30,113	56.4	--	--	17,844	33.4	5,376	10.1	32	.1
Manufacturers' sales offices	63	40,122	50	33,922	84.5	33,922	100.0	2,236	6.6	--	--	25,927	76.4	3,782	11.2	1,977	5.8
Agents	233	20,351	208	18,665	91.7	18,665	100.0	2,800	15.0	63	.3	7,018	37.6	8,318	44.6	466	2.5
Radios, Refrigerators and Appliances	1,532	342,362	1,268	317,877	92.8	317,877	100.0	185,626	58.4	13,552	4.3	38,614	12.1	68,532	21.6	11,553	3.6
Full-service & limited-function wholesalers	1,086	294,519	940	274,046	93.0	274,046	100.0	168,062	61.3	12,167	4.4	22,365	8.2	61,402	22.4	10,050	3.7
Manufacturers' sales branches	164	17,102	80	15,069	88.1	15,069	100.0	11,266	74.8	1,290	8.5	1,065	7.1	1,448	9.6	--	--
Manufacturers' sales offices	32	15,865	29	15,839	99.8	15,839	100.0	2,313	14.6	52	.3	11,498	72.6	1,947	12.3	29	.2
Agents	250	14,876	219	12,923	86.9	12,923	100.0	3,985	30.8	43	.4	3,686	28.5	3,735	28.9	1,474	11.4

When electrical wholesalers are analyzed by major lines of merchandise, greater differences in the channels of distribution which they utilize are found. Full-line electrical wholesalers find their major market (55.8 percent of sales) with industrial consumers although one-third (33.1%) of their total business is with retailers. Full-service and limited-function wholesalers carrying a full-line of electrical merchandise, however, did one-half (50.2%) of their business with retailers and the other half (47.0%) almost entirely with industrial consumers. Full-line manufacturers' sales branches (72.2%) and manufecturers' sales officee (73.2%) did three-fourths of their business with industrial consumers and the remainder with wholesalers. Full-line agents sold 70.3 percent of their distributed sales to industrial consumers and 22.2 percent to retailers. Sales to household consumers and export sales are insignificant for all four types. Manufacturers' sales branches and salee offices, to summarize the full line of business, sold to industrial consumers while full-service and limited-function wholesalers disposed of their merchandise mainly to retailers. Similar analyses can be made for apparatus and equipment, wiring supplies and construction materials, and appliance wholesalers through the use of Table 26.

Commodity Sales of Electrical Wholesalers

Each electrical wholesaler was asked to analyze his sales into the commodity classifications which are listed in the wholesale schedule (see Appendix). Total net sales in the electrical trade amounted to $1,109,404,000 and a commodity analysis was received from wholesalers whose sales totalled $1,076,262,000 or 97 percent of total sales. In each of the four major types of operation, the commodity coverage was over 95 percent.

A brief summary of the commodity sales of electrical wholesalers is shown in Table 27 for the four types of operation. The sales of full-service and limited-function wholesalers were composed almost entirely (93.8%) of electrical merchandise. The same was true for the other three types of operation. In the case of manufacturers' sales offices, non-electrical merchandise was greatest, accounting for 13 percent of sales or about one-eighth. For the other three types of operation, non-electrical merchandise amounted to no more than 6 percent of sales. Thus, it is seen that electrical wholesalers limit themselves closely to items falling within the electrical classifications. The figures for non-electrical merchandise, on the other hand, are probably somewhat understated because the books of reporting wholesalers were not adapted to this type of analysis; therefore it was inevitable that many small items were not listed separately on the schedules. To the extent that this occurred, the analysis of sales was only approximate.

An examination of the three major merchandise classifications in the electrical field indicates that manufacturere' sales branches (70.0%) and manufacturers' sales offices (50.2%) specialized in the apparatus and equipment field which they dominated. In the case of wiring supplies and construction materials, full-service and limited-function wholesalers emphasized this merchandise (28.5% of sales), while manufacturers seles offices (23.1%) and sales branches (15.1%) also found it of importance. Agents were found to specialize in wiring supplies and construction materials and the appliance business. Examining the total sales of wiring supplies and construction materials, it is found that full-service and limited-function wholesalers sold one and one-half times as much as the three other types combined. In the case of radios, refrigerators and appliances, full-service and limited-function wholesalers dominated and did 58.7 percent of their business in such merchandise.

The non-electrical commodities handled by electrical wholesalers are also shown in Table 27. For full-service and limited-function wholesalers, non-electrical commodities amounted to 6.2 percent of total sales. Of this amount, one-half (3.2%) was in automotive parts and accessories and one-sixth (1.0%) in plumbing, heating and air-conditioning equipment and supplies, while minor quantities of house furnishings (.2 of 1%), hardware (.1 of 1%) and industrial equipment and supplies (.1 of 1%) were handled. A number of other commodities, each of which accounted for less than one-tenth of one percent of the total, were sold by full-service and limited-function wholesalers and, taken together, amounted to six-tenths of one percent of sales. Service and other receipts were 1 percent of sales.

A similar analysis can be made for manufacturers' sales branches, manufacturers' sales offices, and agents. In this manner, it is possible to discover the lines of merchandise most commonly handled by electrical wholesalers. In the case of an individual wholesaler who wishes to expand the line of merchandise which he handles, it is possible to learn what commodities are most commonly stocked by similar establishments in the electrical trade and what proportion of their total business is accounted for by such items.

TABLE 27.--COMMODITY SALES OF ELECTRICAL WHOLESALERS
BY TYPE OF OPERATION FOR THE UNITED STATES

(all values are expressed in thousands of dollars)

Commodity	Total reported commodity sales	Full-service & limited-function wholesalers		Manufacturers' sales branches		Manufacturers' sales offices		Agents and brokers	
		Amount	% to total	Amount	% to total	Amount	% to total	Amount	% to total
Total net sales	$1,109,404	$576,542	52.0	$349,819	31.5	$137,180	12.4	$45,863	4.1
Reported commodity sales	1,076,262	547,524	50.9	348,343	32.4	136,332	12.7	44,063	4.0
Percent of commodity coverage	97.0	95.0		99.6		99.4		96.1	
Reported commodity sales	$1,076,262	$547,524	100.0	$348,343	100.0	$136,332	100.0	$44,063	100.0
Electrical commodities - total	1,003,141	513,420	93.8	329,632	94.6	118,411	86.9	41,678	94.6
Apparatus and equipment	337,023	36,146	6.6	243,829	70.0	68,345	50.2	8,703	19.7
Wiring supplies and construction materials	259,443	155,843	28.5	52,512	15.1	31,533	23.1	19,555	44.4
Radios, refrigerators & appliances	386,675	321,431	58.7	33,291	9.5	18,533	13.6	13,420	30.5
Non-electrical commodities	73,121	34,104	6.2	18,711	5.4	17,921	13.1	2,385	5.4
Automotive parts & accessories	28,279	17,205	3.2	4,862	1.4	5,738	4.2	474	1.1
House furnishings	975	927	.2	--	--	--	--	48	.1
Hardware	900	766	.1	--	--	--	--	134	.3
Plumbing, heating & air-conditioning equipment & supplies	6,273	5,265	1.0	547	.2	289	.2	172	.4
Industrial equipment and supplies (except electrical & railroad)	2,126	723	.1	--	--	1,232	.9	171	.4
Industrial machinery (except electrical)	2,707	--	--	--	--	2,618	1.9	89	.2
Copper	10,503	--	--	2,481	.7	8,022	5.9	--	--
Iron and steel (except scrap)	59	--	--	--	--	--	--	59	.1
Nonferrous metals (except as listed)	51	--	--	--	--	--	--	51	.1
Service and other receipts	16,330	5,749	1.0	10,461	3.0	22	--	98	.2
All other commodities	4,918	3,469	.6	360	.1	--	--	1,089	2.5

In Table 28 are listed the sales of all electrical commodities for both electrical and non-electrical wholesalers. An examination of this table indicates that electrical merchandise is sold largely through the electrical trade. Manufacturers' sales offices in the plumbing and heating equipment field have 11.0 percent of their sales in electrical merchandise and this proportion is higher than for any other non-electrical classification. Full-service and limited-function hardware wholesalers sell electrical merchandise to the extent of 6.4 percent of their sales, while the ratio for agents and brokers in the general merchandise field is 5.9 percent. Likewise, automotive full-service and limited-function wholesalers have electrical sales amounting to 2.9 percent of their business. With these few exceptions, the sale of electrical merchandise amounts to under 2 percent for every classification listed in Table 28. A further analysis also shows that the sales of electrical merchandise by non-electrical wholesalers is largely limited to the electrical appliance field.

The number of establishments and their sales as given in Table 28 apply to those wholesalers who turned in satisfactory commodity information. For example, the number of full-service and limited-function electrical wholesalers given is 2,269 with net sales of $547,524,000. The total number of full-service and limited-function electrical wholesalers in the country in 1935 was 2,438 with sales of $576,542,000. The column headed "Percent of commodity coverage," is the percentage ratio (95.0%) which the sales of full-service and limited-function electrical wholesalers reporting satisfactory commodity information ($547,524,000) bear to total sales of all wholesalers classified similarly ($576,542,000), including both those which did and those which did not give usable commodity information. In this manner, the size of the sample upon which the commodity information is based has been shown for each type of operation under every kind of business.

To summarize the commodity information, it is a fair conclusion to state that electrical wholesalers sell little non-electrical merchandise, usually less than one-twentieth of their total volume. Similarly, the sales of electrical merchandise by non-electrical wholesalers is also very small, exceeding one-twentieth of their total business only in a very few minor cases. The sale of electrical merchandise at wholesale, therefore, is one largely remaining in the hands of establishments specializing in that business.

Sales Radius

To determine the area which wholesale establishments covered regularly by their salesmen, a question of sales radius was included on the Wholesale schedule. No attempt was made to determine the total area served by a concern but merely the region in which it contacted customers regularly. Wholesalers were, with this in mind, asked to state the approximate radius in miles within which 75 percent of their 1935 sales were concentrated. This does not mean, naturally, that a wholesaler covers regularly an identical territory in every direction from his place of business. Obviously, in the case of a sea-coast city, the sales territory

CENSUS OF BUSINESS: 1935

TABLE 28.--WHOLESALE SALES OF ELECTRICAL MERCHANDISE BY KINDS OF BUSINESS AND TYPES OF OPERATION FOR THE UNITED STATES

(all values are expressed in thousands of dollars)

Type of Operation Kind of Business	Number of establishments	Amount of Sales	Percent commodity coverage	Sales of electric commodities							
				Total		Apparatus and equipment		Wiring supplies and construction materials		Radios, refrigerators & appliances	
				Amount	% of total net sales	Amount	% of total net sales	Amount	% of total net sales	Amount	% of total net sales
FULL-SERVICE AND LIMITED-FUNCTION WHOLESALERS											
Amusement and eporting goods	950	$107,419	92.0	$882	0.8	$9	1.0	$116	13.2	$757	85.8
Automotive	5,416	743,303	95.2	21,603	2.9	3,098	14.3	2,526	11.7	15,979	74.0
Beer, wines and liquore	5,177	659,293	94.4	170	--	--	--	--	--	170	100.0
Chemicals and paints	1,277	245,986	89.4	289	0.1	12	4.1	15	5.2	262	90.7
Clothing and furnishinge	3,075	616,481	95.0	18	--	--	--	--	--	18	100.0
Coal and coke	720	355,023	96.3	2	--	2	100.0	--	--	--	--
Drugs (full-line)	251	260,710	80.4	442	0.2	--	--	7	1.6	435	98.4
Drugs and drug sundries (specialty linss)	1,169	116,209	94.1	348	0.3	--	--	--	--	348	100.0
Dry goods (full-line)	227	187,436	70.5	696	0.4	--	--	19	2.7	677	97.3
Dry goods (specialty linee)	3,091	703,841	97.8	11	--	--	--	6	54.5	5	45.5
Electrical goods	2,269	547,524	95.0	513,420	93.8	36,146	7.0	155,843	30.4	321,431	62.6
Farm producte-raw materials	2,047	1,508,746	96.6	6	--	--	--	--	--	6	100.0
Farm products-consumer goods	10,506	1,742,875	90.0	96	--	--	--	--	--	96	100.0
Farm supplise	1,040	202,782	72.0	74	--	--	--	17	23.0	57	77.0
Furniture and house furniehings	1,819	235,026	96.5	1,872	0.8	--	--	287	15.3	1,585	84.7
General merchandise	156	337,657	93.4	5,842	1.7	830	14.2	1,564	26.8	3,448	59.0
Groceries (full-line)	1,975	1,028,468	52.6	185	--	1	0.5	124	67.0	60	32.5
Groceries and foods (specialty lines)	10,726	1,450,621	86.2	269	--	--	--	13	5.6	254	94.0
Hardware	945	336,381	78.5	21,462	6.4	269	1.3	7,560	35.2	13,633	63.5
Jewelry and optical goods	1,773	176,954	97.9	530	0.3	--	--	--	--	530	100.0
Lumber and construction materiale	2,459	434,717	88.4	531	0.1	--	--	63	11.9	468	88.1
Machinery, equipment and supplies	6,138	729,447	87.3	8,598	1.2	1,210	14.1	2,623	30.5	4,765	55.4
Metals and metal work (except scrap)	708	260,661	92.4	158	--	3	1.9	74	46.8	81	51.3
Paper and its products	2,354	388,577	95.0	159	--	--	--	29	18.2	130	81.8
Petroleum and ite products	662	131,543	99.4	58	--	--	--	3	5.2	55	94.8
Plumbing and heating equipment and supplies	1,631	223,970	92.1	4,079	1.8	132	3.2	2,185	53.6	1,762	43.2
Tobacco and its products (except leaf)	2,022	701,410	89.5	6	--	--	--	3	50.0	3	50.0
Waste materiale	4,258	384,763	96.3	45	--	5	11.1	36	80.0	4	8.9
All other producte	3,884	531,547	96.6	135	--	70	51.9	35	25.9	30	22.2
MANUFACTURERS' SALES BRANCHES											
Automotive	864	1,258,262	99.7	3,078	0.2	1,624	52.8	1,411	45.8	43	1.4
Electrical goods	415	348,343	99.6	330,005	94.7	244,202	74.0	52,512	15.9	33,291	10.1
Machinery, equipment and supplies	2,453	662,145	95.5	3,870	0.6	2,652	68.5	922	23.8	296	7.7
Metals and metal work (except scrap)	246	238,748	98.1	3,230	1.4	--	--	3,184	98.6	46	1.4
Paper and its products	199	145,248	96.6	128	--	--	--	128	100.0	--	--
Plumbing and heating equipment and supplies	334	95,702	93.6	1,377	1.4	270	19.6	907	65.9	200	14.5
MANUFACTURERS' SALES OFFICES											
Electrical goods	260	136,332	99.4	118,473	87.0	68,385	57.7	31,555	26.6	18,533	15.7
Furniture and house furnishinge	112	55,717	70.6	21	--	--	--	21	100.0	--	--
Hardware	28	9,553	52.1	5	--	--	--	--	--	5	100.0
Machinery, equipment and supplies	1,021	440,359	89.4	2,657	0.6	2,451	92.2	97	3.7	109	4.1
Metals and metal work (except scrap)	389	840,839	82.3	6,216	0.7	--	--	5,925	95.3	291	4.7
Paper and its products	178	135,991	99.4	63	--	--	--	63	100.0	--	--
Plumbing and heating equipment and supplies	170	21,606	94.1	2,385	11.0	1,669	70.0	--	--	716	30.0
All other products	290	137,213	81.9	16	--	--	--	16	100.0	--	--
AGENTS											
Amusement and sporting goods	226	21,876	91.4	231	1.1	2	0.9	195	84.4	34	14.7
Automotive	429	53,688	78.2	481	0.9	3	0.6	102	21.2	376	78.2
Chemicals and paints	395	92,364	93.8	22	--	11	50.0	--	--	11	50.0
Drugs and drug sundries (specialty lines)	124	22,775	84.7	6	--	--	--	--	--	6	100.0
Electrical goods	605	44,063	96.1	41,678	94.6	8,703	20.9	19,555	46.9	13,420	32.2
Furniture and house furnishinge	406	73,389	97.6	655	0.9	--	--	201	30.7	454	69.3
General merchandise	31	19,727	29.7	1,165	5.9	240	20.6	70	6.0	855	73.4
Grocsriss and foode (specialty linss)	1,655	1,386,527	77.2	24	--	--	--	23	95.8	1	4.2
Hardware	272	30,631	94.2	493	1.6	5	1.0	345	70.0	143	29.0
Jewelry and optical goods	119	6,632	99.2	25	0.4	--	--	--	--	25	100.0
Lumber and construction materials	748	124,614	89.6	273	0.2	23	8.4	243	89.0	7	2.6
Machinery, equipment and supplies	2,283	198,770	94.3	1,046	0.5	312	29.8	341	32.6	393	37.6
Metals and metal work (except scrap)	354	154,079	88.9	112	--	110	98.2	--	--	2	1.8
Petrolsum and ite products	105	72,072	99.1	14	--	--	--	14	100.0	--	--
Plumbing and heating equipment and supplies	391	23,890	92.6	449	1.9	1	0.2	--	--	448	99.8
All other producte	997	450,397	92.2	26	--	--	--	2	7.7	24	92.3

would not be circular in nature but would at most represent a half circle. This is an extreme example although geographic and competitive factors ordinarily make it desirable for a wholesaler to extend his territory unequally from the city in which he is located. Sales territories tend to be, therefore, irregular in pattern. The information obtained on the wholesale schedule did not indicate this but merely enumerated the longest distance at which a wholesaler sold in order to include three-fourths of his sales.

As has been shown in Table 8, the wholesale electrical trade is concentrated in the large trade centers. An examination of the schedules showed that electrical wholesalers were almost invariably located in cities of some size. The data in Table 29 should, therefore, be interpreted as representing wholesalers in the larger cities of each geographic division. This information was not given by cities in order to avoid disclosures and to avoid the drawing of conclusions from very small samples. The 348 wholesale merchants which are analyzed had sales of $170,446,000. These figures do not coincide with the totals shown in Table 5 for full-line wholesalers because the schedules have been reclassified in order to eliminate establishments which, although more nearly fitting the full-line wholesale merchant classification of the Census than any other classification, do not fully coincide with the ideas of the electrical trade. This sample is explained in detail on Page 46.

An examination of the data in Table 29 shows that establishments representing nine-tenths (89.1%) of the total business done by these full-line wholesale merchants regularly serve a territory not exceeding 150 miles. According to the Census definition of sales radius, these establishments may do some business (not exceeding 25 percent of the total) in areas at a greater distance. Such sales are likely to come, however, from customers who are not covered regularly or who buy from such a wholesaler for some particular reason. Since a few sales are likely to be made at very long distances by any wholesaler who does a good sized business, the figures have much greater significance when limited to the normal regularly served areas.

Wholesale merchants whose business amounts to one-half (54.0%) of the total operate within a 75 mile radius while houses representing one-third (35.1%) of the business limited their regular territory to between 76 and 150 miles. This does not mean that all of the total business transacted by wholesalers with a radius of from 76 to 150 miles is limited to the area over 75 miles from their establishments and under 150 miles. It does mean, however, that three-quarters of the sales of such wholesalers take place in the establishment, in the local city, in the surrounding cities, and in adjoining territory up to a limit not exceeding 150 miles. As regards a specific city, the second group of wholesalers did compete with the first group (sales radius not over 75 miles) in that city and the surrounding territory up to 75 miles. Above the 75 mile limit, the second group of wholesalers (radius 76 to 150 miles) would feel substantially less competition from the establishments with smaller sales radius and, above the 150 mile limit, would offer very little competition to wholesalers of the same city which did not limit their sales radius to 150 miles but covered a larger territory.

TABLE 29.--THE MARKET RADIUS 1/ IN THE ELECTRICAL TRADE
SELECTED FULL-LINE WHOLESALE MERCHANTS, BY GEOGRAPHIC DIVISIONS

Geographic division	Number of establishments	Total net sales		Percent of total net sales			
		Amount (add 000)	Percent of total for sample	Not over 75 miles	76 to 150 miles	151 to 250 miles	251 miles and over
Full-Line Sample - Total	348	$170,446	100.0	54.0	35.1	5.1	5.8
New England	26	11,702	6.9	81.2	11.6	5.7	1.5
Middle Atlantic	65	39,362	23.1	78.4	21.3	.3	--
East North Central	76	39,527	23.2	69.3	22.0	--	8.7
West North Central	35	16,430	9.6	28.4	52.2	19.4	--
South Atlantic	42	17,615	10.3	48.6	40.2	6.7	4.5
East South Central	11	3,077	1.8	22.6	56.4	9.2	11.8
West South Central	34	10,324	6.1	22.9	54.9	--	22.2
Mountain	13	5,712	3.3	12.1	69.0	10.9	8.0
Pacific	46	26,697	15.7	27.5	53.9	9.6	9.0

1/ For census purposes, market radius includes only the area within which 75 percent of the sales of an establishment are made.

For the country, full-line wholesale merchants doing 94.2 percent of the total business had a sales radius not exceeding 250 miles. The remaining establishments, accounting for only 5.4 percent of total sales, sold over larger areas. Turning to the geographical divisions of the country, it is found that a similar picture exists for each major area. The concentration of sales within the 150 mile radius was greatest in the Middle Atlantic region where houses handling 98.5 percent of sales so limited their territory. In the case of the West South Central States, the low point was reached with houses accounting for 77.8 percent of the total business limiting the area regularly served to 150 miles. Considerable variation, in addition, is found between the share of the business done by wholesalers limiting themselves to a 75 mile coverage. Between these two divisions (not over 75 miles, and 76 to 150 miles), the difference from one geographic division of the country to another probably reflects regional variation and local business conditions.

The inevitable conclusion, nevertheless, is that electric wholesalers do a regional rather than a national or city business. To the wholesale establishment wishing to expand its sales volume or to the manufacturer examining his market coverage, these figures are of significance. They delineate in broad terms to manufacturers the coverage offered by full-line wholesale merchants and indicate the desirability to a wholesale merchant of establishing a branch house rather than trying to serve an extensive territory from one establishment.

Operating expenses are analyzed in detail and by sales radius in Table 30. Houses with a sales radius exceeding 250 miles have costs (16.3%) considerably higher than those (13.4% to 14.7%) for establishments emphasizing smaller market areas. As regards administrative, selling, delivery, warehouse and "other" expenses, the houses with large sales radii (over 250 miles) have costs exceeding the average for the whole group. Only in the case of occupancy (1.4%), do their expenses fall below the general average (1.6%). Similarly, sales per outside salesman are lower for the establishments with sales radii exceeding 250 miles than for the other houses. These facts verify the conclusion that electrical wholesaling is a regional business.

TABLE 30.--ANALYSIS OF OPERATING EXPENSES BY MARKET RADIUS 1/
SPECIAL SAMPLE OF FULL-LINE WHOLESALE MERCHANTS

(All values are expressed in thousands of dollars.)

Sales radius (miles)	Number of establishments	Net sales	Operating expenses		Operating expense (including pay roll) expressed as percent to net sales						Sales per outside salesman
			Amount	% to net sales	Administrative	Selling	Delivery	Warehouse	Occupancy	Other	
Total	348	$170,446	$24,669	14.5	4.6	5.1	.6	1.7	1.6	.9	$98
Not over 75 miles	185	92,074	13,519	14.7	4.7	5.2	.6	1.8	1.6	.8	93
76 to 150 miles	119	59,821	8,376	14.0	4.4	4.9	.6	1.6	1.5	1.0	110
151 to 250 miles	19	8,618	1,158	13.4	4.0	4.6	.6	1.6	1.4	1.2	93
251 miles and over	25	9,933	1,616	16.3	6.0	5.4	.7	1.8	1.4	1.0	86

1/ For census purposes, market radius includes only the area within which 75 percent of the sales of an establishment are made.

COMPARATIVE DATA FOR IDENTICAL WHOLESALE MERCHANTS

To compare the wholesale electrical trade for 1935, 1933, and 1929, offers numerous difficulties. One possible solution was to select a group of wholesalers for whom usable information was available for three Census years. The sample for these special tabulations was limited to 236 wholesale merchants doing a full-line business with a few wholesale merchants specializing in wiring supplies and construction materials included so that a reasonable balance could be maintained between the various geographic divisions and between business size groups. Likewise, each schedule for these full-line wholesale merchants was examined to be sure that no peculiarities existed which might cause material deviation from the trade concept of "wholesaler" or "jobber". Practically all of the wiring supply and construction material houses included might be considered by the electrical trade to be full-line wholesale merchants. The houses, therefore, represent substantially the full-line jobber or wholesale business as defined by the electrical trade itself. (For 1935, 386 schedules were found which met the stated qualifications. Except where comparisons with 1933 and 1929 were made, special tabulations include each of these 386 houses which furnished adequate data.) In these comparisons for the three years, the 1929 figures were taken as a base. Inasmuch as 1929 was a year of activity, 1933 a year of depression, and 1935 a year of recovery, the figures in Table 31 show the fluctuations of the electrical trade for establishments which were in existence before the depression and lived through it successfully.

For the country as a whole the sales of these 236 identical wholesale merchants dropped from a high point of $235,187,000 in 1929 to a low of $84,945,000 in 1933. In other words, sales dropped almost two-thirds (63.9%) between 1929 and 1933. Between 1933 and 1935 they rose substantially and amounted to 56.4 percent of the 1929 total. While sales gyrated so greatly, employees, pay roll, total expenses, and stocks on hand maintained a more even keel. Between 1929 and 1933 sales dropped 63.9 percent while employees declined 31.7 percent, full-time pay roll 49.0 percent, total expenses 49.8 percent, and stocks on hand only 33.2 percent. As shown in Table 32, the result was to increase operating expense ratios materially. Between 1933 and 1935 sales rose from one-third (36.1%) to almost three-fifths (56.4%)of the 1929 totals. Employees, pay roll, total expenses and stocks on hand also rose to an extent which made 1935 costs bear a greater ratio to total sales than was true in 1929.

Wages in the electrical trade dropped materially between 1929 and 1933, as demonstrated by the fact that regular employees decreased one-third (31.7%) while full-time pay roll fell almost one-half (49.0%). Full-time employment rose to over three-quarters (77.7%) of the 1929 figure during 1935, but full-time pay roll increased not quite to two-thirds (65.2%) of the 1929 total, indicating that wages were still somewhat under the 1929 level.

TABLE 31. -- COMPARATIVE DATA FOR 236 IDENTICAL FULL-LINE WHOLESALE MERCHANTS: 1935, 1933, 1929

	Total U. S. Summary	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	South Central	Mountain and Pacific
Number of Establishments	236	17	50	51	28	28	18	44
Net Sales								
1935 - Total	$132,744	$8,474	$36,475	$26,375	$14,664	$12,724	$6,351	$27,681
1935 - % to 1929	56.4	57.2	52.4	48.2	66.3	73.5	41.1	67.2
1933 - Total	$84,945	$6,021	$28,191	$14,895	$7,407	$8,504	$4,037	$15,890
1933 - % to 1929	36.1	40.7	40.5	27.2	33.5	49.1	26.1	38.6
1929 - Total	$235,187	$14,804	$69,666	$54,674	$22,109	$17,306	$15,445	$41,183
Employees								
1935 - Total	6,122	433	1,630	1,068	690	710	333	1,258
1935 - % to 1929	77.7	89.6	69.4	68.4	89.3	91.8	68.1	86.6
1933 - Total	5,387	356	1,649	969	525	608	263	1,017
1933 - % to 1929	68.3	73.7	70.2	62.0	67.9	78.7	53.8	70.0
1929 - Total	7,882	483	2,349	1,562	773	773	489	1,453
Total Pay Roll - Full-Time								
1935 - Total	$10,963	$674	$3,089	$1,980	$1,212	$1,256	$549	$2,203
1935 - % to 1929	65.2	63.2	62.8	56.3	78.9	73.3	57.2	70.8
1933 - Total	$8,584	$576	$2,672	$1,615	$818	$908	$396	$1,599
1933 - % to 1929	51.0	54.0	54.3	45.9	53.3	53.0	41.3	51.4
1929 - Total	$16,821	$1,067	$4,920	$3,515	$1,536	$1,714	$959	$3,110
Total Pay Roll - Part-Time								
1935 - Total	$67	$1	$13	$20	$6	$9	$3	$15
1933 - Total	$121	$10	$24	$21	$14	$7	$4	$41
Total Expenses (including pay roll)								
1935 - Total	$19,676	$1,203	$5,546	$3,621	$2,185	$1,973	$975	$4,173
1935 - % to 1929	61.4	57.4	61.3	53.3	69.8	72.0	46.8	68.0
1933 - Total	$16,087	$1,092	$4,856	$3,018	$1,760	$1,596	$742	$3,023
1933 - % to 1929	50.2	52.1	53.6	44.4	56.2	58.2	35.6	49.3
1929 - Total	$32,032	$2,095	$9,053	$6,795	$3,129	$2,741	$2,084	$6,135
Stocks on Hand, Dec. 31								
1935 - Total	$19,603	$1,149	$4,880	$3,885	$2,083	$2,028	$1,372	$4,206
1935 - % to 1929	95.5	80.0	97.9	94.5	98.8	112.2	76.8	97.9
1933 - Total	$13,716	$1,083	$3,995	$2,466	$1,297	$1,091	$809	$2,975
1933 - % to 1929	66.8	75.4	80.2	60.0	61.5	60.4	45.3	69.3
1929 - Total	$20,530	$1,437	$4,984	$4,112	$2,108	$1,807	$1,787	$4,295

Part-time pay roll was not available for 1929 and is included for 1935 and 1933 merely to indicate the drop in part-time employment as the depression began to lift. The small part-time pay roll for both years also shows that the electrical trade is characterized by full-time employment.

Stocks on hand (at cost) fell only one-third (33.2%) between 1929 and 1933, while sales were shrinking almost two-thirds (63.9%). Between 1933 and 1935 stocks rose until, for 1935, they equaled 95.5 percent of the 1929 totals, although sales did not quite reach three-fifths (56.4%) of the 1929 figures.

TABLE 32. -- 236 IDENTICAL WHOLESALE MERCHANTS
BY BUSINESS-SIZE GROUPS: 1935, 1933, 1929

	Total	Under $50,000	$50,000 to 99,999	$100,000 to 199,999	$200,000 to 499,999	$500,000 to 999,999	$1,000,000 to 1,999,999	$2,000,000 and over
Net Sales								
1935 - Total (add 000)	$132,744	--	--	$8,716	$32,618	$32,993	$36,754	$21,663
1935 - % to 1929	56.4	--	--	316.0	114.4	78.5	64.8	20.7
1933 - Total (add 000)	$84,945	$212	$1,676	$12,024	$24,172	$13,067	$21,607	$7,187
1933 - % to 1929	36.1	--	332.5	436.0	84.7	43.0	38.1	6.9
1929 - Total (add 000)	$235,187	--	$504	$2,758	$28,524	$42,046	$56,678	$104,677
Total Expenses								
1935 - Total (add 000)	$19,676	--	--	$1,399	$4,797	$5,023	$5,483	$2,974
1935 - % to net sales	14.8	--	--	16.1	14.7	15.2	14.9	13.7
1933 - Total (add 000)	$16,087	$53	$259	$2,516	$4,809	$3,352	$3,879	$1,219
1933 - % to net sales	18.9	25.0	15.5	20.9	19.9	18.6	18.0	17.0
1929 - Total (add 000)	$32,032	--	$111	$426	$4,718	$6,213	$8,157	$12,407
1929 - % to net sales	13.6	--	22.0	15.4	16.5	14.8	14.4	11.9
Total Pay Roll								
1935 - Total (add 000)	$10,963	--	--	$768	$2,746	$2,720	$3,115	$1,614
1935 - % to net sales	8.3	--	--	8.8	8.4	8.2	8.5	7.5
1933 - Total (add 000)	$8,584	$26	$121	$1,201	$2,438	$1,884	$2,100	$814
1933 - % to net sales	10.1	12.3	7.2	10.0	10.1	10.4	10.0	11.3
1929 - Total (add 000)	$16,816	--	$51	$247	$2,435	$3,079	$4,210	$6,794
1929 - % to net sales	7.2	--	10.1	9.0	8.5	7.3	7.4	6.5
Stocks on Hand, Dec. 31								
1935 - Total (add 000)	$19,603	--	--	$1,596	$4,967	$4,992	$5,614	$2,434
1935 - % to net sales	14.8	--	--	18.3	15.2	15.1	15.3	11.2
1933 - Total (add 000)	$13,716	$61	$291	$2,342	$4,139	$2,907	$3,182	$794
1933 - % to net sales	16.1	28.8	17.4	19.5	17.1	16.1	14.7	11.0
1929 - Total (add 000)	$20,530	--	$136	$356	$3,554	$4,254	$5,640	$6,590
1929 - % to net sales	8.7	--	27.0	12.9	12.5	10.1	10.0	6.3

This indicates rather strikingly the difficulty which houses have in adjusting certain relatively fixed charges to fluctuations in business conditions. As illustrated by the case of stocks, wholesale merchants found it almost impossible to adjust their overhead to shifts in sales volume.

When these 236 identical full-line wholesale merchants are analyzed by business size groups in Table 32, it is found that, using 1929 as a base, the business done in the smaller size groups was a much larger share of the total in 1933 than in 1929, indicating the substantial decrease in the volume done by each individual house. Similarly the increase of houses in the larger size groups between 1933 and 1935 shows the increased volume of each concern. More significant is the analysis of operating expenses. In each of the years, these expense ratios show a constant decrease as the size group increases. The cost ratio for the country as a whole was 13.6 percent for 1929 and, with badly shrinking sales, reached a high of 18.9 percent in 1933. As sales rose between 1933 and 1935 the expense ratio fell to an average of 14.8 percent. Since this expense ratio of 14.8 percent was obtained with sales equal to less than three-fifths (56.4%) of the 1929 total, it is reasonable to assume that, if 1929 sales are again reached, the low cost of 1929 will undoubtedly be reached and, quite likely, even lower cost ratios attained.

Total pay roll figures showed a somewhat similar, although less violent, fluctuation. From a low of 7.2 percent in 1929, they reached a high of 10.1 percent of sales for 1933 and dropped to 7.3 percent for 1935. As the business size group increases, there is a little tendency for the pay roll ratio to drop. Contrasted to this, for each of the three years, the inventory of stocks on hand for resale (at cost) drops materially as the size of the business enlarges. For 1935, this is the one type of expense which is materially above that of 1929.. In general, these wholesalers in 1929 carried stocks which, at cost, amounted to 14.8 percent of sales while for 1929 the figure was 8.7 percent and this proportionate difference holds throughout the size groups. This probably reflects the necessity of a minimum inventory to service adequately a particular area and illustrates the difficulty of adjusting stocks to shifts in sales volume.

The frequency distribution of operating expenses for these 236 full-line wholesale merchants is shown in Table 33. For 1929 the highest frequency was obtained in the 12 to 14 percent group where 48 establishments fell and these did over one-fourth (27.7%) of the total business. In 1933 the highest frequency fell in the 16 to 18 percent class with 33 establishments doing 13.3 percent of the total business, and the same number of houses was in the 18 to 20 percent cost ratio group which accounted for 15.3 percent of the total business. In 1935 the highest number of houses was again found in the 12 and 14 percent ratio group which included 37 establishments accounting for 18.6 percent of total sales. When adjoining ratios are combined, it is found

that, in 1929, three-fourths (74.9%) of the business was done by the 156 establishments whose costs fell between 10 and 18 percent of net sales. For 1933, only 99 establishments doing 43.5 percent of the total business fell within this cost group (10 to 18%). By 1935, however, 134 houses doing 61.7 percent of the total business had cost ratios between 10 and 18 percent. This frequency of cost ratios clearly proves the direct relationship between volume of business and operating expenses in the wholesale electrical trade. In general, therefore, the conclusion that large sales volume leads to low cost for the industry as a whole seems to be clearly justified. The additional details appearing in Table 33 further support such an analysis.

TABLE 33.--FREQUENCY DISTRIBUTION OF OPERATING EXPENSES FOR 236 IDENTICAL WHOLESALE ELECTRICAL MERCHANTS: 1935, 1933, 1929

Total expenses as a percent of net sales	Establishments						Net sales					
	1935		1933		1929		1935		1933		1929	
	Number	% to total	Number	% to total	Number	% to total	Amount (add 000)	% to total	Amount (add 000)	% to total	Amount (add 000)	% to total
Total	236	100.0	236	100.0	236	100.0	$132,744	100.0	$84,295	100.0	$235,187	100.0
Under 8	11	4.7	4	1.7	12	5.1	4,530	3.3	1,086	1.3	19,990	8.5
8 to 9.99	25	10.6	10	4.2	13	5.5	15,908	12.0	2,942	3.5	8,790	3.7
10 to 11.99	26	11.0	13	5.5	35	14.8	11,605	8.7	3,450	4.1	43,893	18.7
12 to 13.99	37	15.7	23	9.7	48	20.3	24,722	18.6	8,148	9.6	65,148	27.7
14 to 15.99	35	14.8	33	14.0	46	19.5	21,997	16.6	11,339	13.3	45,574	19.4
16 to 17.99	36	15.3	30	12.7	27	11.5	23,637	17.8	13,858	16.3	21,480	9.1
18 to 19.99	26	11.0	33	14.0	13	5.5	13,125	9.9	13,036	15.3	7,856	3.4
20 to 21.99	19	8.1	22	9.3	18	7.6	11,008	8.3	10,526	12.4	8,948	3.9
22 to 23.99	11	4.7	20	8.5	6	2.6	4,248	3.2	6,301	7.4	2,632	1.1
24 to 25.99	5	2.1	13	5.5	9	3.8	781	.6	5,584	6.6	7,804	3.3
26 and over	5	2.0	35	14.9	9	3.8	1,183	1.0	8,675	10.2	3,072	1.2

Operating Expenses, Employees and Pay Roll in Detail. For the 386 full-line wholesale merchants which were included in the special sample, operating expenses for 1935 are analyzed into administrative, selling, delivery, warehouse, occupancy, and "other" expenses according to business size groups in Table 34. In the second part of this table, employees are analyzed into executive, office and clerical, inside selling, outside selling, warehouse, and other employees. The limitations of these figures have been described on Page 18 for operating expenses in detail and on Page 28 for employment during one representative week only. In the case of Table 34, the average weekly wages of executives have been calculated and the number and pay roll of part-time employees included. These two sets of figures were not given for the entire wholesale electrical trade because their significance is very limited unless substantially similar establishments are compared. Even in the case of this select sample, it must be remembered that the functions of executives differ from one establishment to another and that the compensation for proprietors, partners and firm members of unincorporated concerns are not included. Similarly, no information is available as to the amount of time devoted by part-time employees to the business.

The additional information appearing here further confirms the conclusions previously drawn and indicates that, in electrical wholesaling, the census classification of full-service and limited-function wholesalers adequately pictures what the trade designates as the electrical "wholesaler" or "jobber."

Census of Business: 1935

TABLE 34.--OPERATING EXPENSES, EMPLOYMENT AND PAY ROLL IN DETAIL BY BUSINESS-SIZE GROUPS FOR 386 SELECTED WHOLESALE MERCHANTS

	Net sales size groups						
	Total	$100,000 to $199,999	$200,000 to $299,999	$300,000 to $499,999	$500,000 to $999,999	$1,000,000 to $1,999,999	$2,000,000 and over
Number of establishments	386	115	66	101	63	33	8
Net sales (add 000)	$183,660	$17,594	$16,517	$38,829	$43,406	$45,651	$21,663
Percent to total	100.0	9.6	9.0	21.1	23.6	24.9	11.8
Total expenses (add 000)	$26,489	$2,750	$2,219	$5,324	$6,444	$6,778	$2,974
Percent to net sales	14.4	15.6	13.4	13.7	14.8	14.8	13.7
Administrative expenses, % to net sales	4.7	5.2	4.3	4.5	4.9	5.1	3.5
Selling expenses, % to net sales	5.0	4.8	4.6	4.7	5.3	5.0	5.5
Delivery expenses, % to net sales	0.6	0.9	0.5	0.6	0.6	0.5	0.5
Warehouse expenses, % to net sales	1.7	1.2	1.7	1.4	1.8	1.7	2.0
Occupancy expenses, % to net sales	1.5	2.0	2.1	1.3	1.6	1.5	1.4
Other expenses, % to net sales	0.9	1.5	0.2	1.2	0.6	1.0	0.8
Employees							
Full-time							
Number	8,479	986	719	1,729	2,025	2,072	948
Pay roll (average weekly wage)	$292,334	$30,562	$25,166	$58,927	$70,354	$75,463	$31,862
Part-time							
Number	95	17	9	33	22	11	3
Pay roll	$1,600	$328	$249	$414	$367	$196	$46
Executives							
Full-time							
Number	690	110	88	158	153	140	41
Percent to total	8.1	11.2	12.2	9.1	7.6	6.8	4.3
Pay roll (weekly)	$62,566	$7,550	$7,442	$12,978	$14,282	$14,411	$5,903
Percent to total	21.4	24.7	29.6	22.0	20.3	19.0	18.5
Average weekly wage	$90.67	$68.63	$84.56	$82.13	$93.34	$102.93	$143.97
Part-time							
Number	3	--	1	2	--	--	--
Pay roll (weekly)	$90	--	$37	$53	--	--	--
Office and Clerical							
Full-time							
Number	2,950	256	208	536	825	836	289
Percent to total	34.8	25.9	28.9	31.0	40.7	40.3	30.4
Pay roll (weekly)	$72,824	$6,167	$4,956	$13,085	$20,028	$20,806	$7,782
Percent to total	24.9	20.2	19.7	22.2	28.5	27.6	24.4
Average weekly wage	$24.69	$24.08	$23.82	$24.41	$24.27	$24.88	$26.92
Part-time							
Number	33	4	3	9	7	9	1
Pay roll (weekly)	$512	$35	$73	$86	$148	$157	$13
Inside Selling Employees							
Full-time							
Number	793	113	56	158	139	201	126
Percent to total	9.4	11.5	7.8	9.1	6.9	9.7	13.3
Pay roll (weekly)	$25,233	$2,969	$1,429	$4,550	$4,503	$7,456	$4,326
Percent to total	8.6	9.7	5.7	7.7	6.4	9.9	13.6
Average weekly wage	$31.81	$26.27	$25.51	$28.79	$32.39	$37.09	$34.33
Part-time							
Number	2	--	--	--	1	--	1
Pay roll (weekly)	$48	--	--	--	$25	--	$23
Outside Selling Employees							
Full-time							
Number	1,911	237	178	410	427	406	253
Percent to total	22.5	24.0	24.8	23.8	21.0	19.6	26.7
Pay roll (weekly)	$80,519	$8,189	$7,125	$16,759	$19,418	$20,665	$8,363
Percent to total	27.6	26.8	28.3	28.5	27.6	27.4	26.3
Average weekly wage	$42.13	$34.55	$40.03	$40.87	$45.47	$50.89	$42.16
Part-time							
Number	4	--	3	--	1	--	--
Pay roll (weekly)	$138	--	$113	--	$25	--	--

(continued)

TABLE 34.--OPERATING EXPENSES, EMPLOYMENT AND PAY ROLL IN DETAIL BY BUSINESS-SIZE GROUPS FOR 386 SELECTED WHOLESALE MERCHANTS

	Net sales size groups						
	Total	$100,000 to $199,999	$200,000 to $299,999	$300,000 to $499,999	$500,000 to $999,999	$1,000,000 to $1,999,999	$2,000,000 and over
Warehouse Employees							
Full-time							
Number	1,661	186	162	353	402	391	167
Percent to total	19.6	18.9	22.5	20.4	19.9	18.9	17.6
Pay roll (weekly)	$39,976	$3,706	$3,558	$8,789	$10,333	$9,707	$3,883
Percent to total	13.7	12.1	14.1	14.9	14.7	12.9	12.2
Average weekly wage	$24.06	$19.92	$21.96	$24.89	$25.70	$24.82	$23.25
Part-time							
Number	25	5	2	10	6	2	--
Pay roll (weekly)	$310	$72	$26	$95	$78	$39	--
Other Employees							
Full-time							
Number	474	84	27	114	79	98	72
Percent to total	5.6	8.5	3.8	6.6	3.9	4.7	7.6
Pay roll (weekly)	$11,216	$1,981	$656	$2,766	$1,790	$2,418	$1,605
Percent to total	3.8	6.5	2.6	4.7	2.5	3.2	5.0
Average weekly wage	$23.66	$23.58	$24.29	$24.26	$22.65	$24.67	$22.29
Part-time							
Number	28	8	--	12	7	--	1
Pay roll (weekly)	$502	$221	--	$180	$91	--	$10

1/ These 386 houses include the 236 identicals described on page 46 and 150 similar wholesale merchants for whom 1933 and 1929 information was not available.

APPENDIX

Census of Business Data

The description of the wholesale electrical trade presented in this special report has been based upon facts obtained from the eight published volumes of Wholesale Distribution: 1935, and from special tabulations made directly from the individual schedules. Information has also been drawn from Distribution of Manufacturers' Sales: 1935. Other reports published by the Census of Business: 1935, cover Retail Trade (6 volumes), Service Establishments (3 volumes), Banking and Finance, Insurance, Hotels, Places of Amusement, the Construction Industry (3 volumes), Transportation and Warehousing, Radio Broadcasting, Advertising Agencies, and a number of special reports. Since this study of the electrical trade is, in part, an illustration of the use of the eight wholesale volumes, a brief description of these is given in the Appendix. Publications of the Census of Business are mailed without charge to interested persons. Requests should be addressed to the Publications Division, Bureau of the Census, Washington.

ARRANGEMENT AND CONTENTS OF VOLUMES ON WHOLESALE DISTRIBUTION: 1935

The results of the Census of Wholesale Trade for the year 1935 are published in a series of eight volumes together with a number of special trade reports, as described below:

Volume I - Summary for the United States. A national summary and analysis of all phases of wholesale distribution in 1935, a part of the Census of Business. In this volume the scope of the Wholesale Census is defined; the data for 1935 are analyzed; terms, classifications and tables are explained and national summaries of the tabular data presented in the other volumes are given. For convenience in making comparisons, a summary tabulation for 1929 and 1933 is included.

This volume also contains new matter not treated in greater detail elsewhere, including a section on legal form of organization showing the basic data for individual proprietorships, partnerships and other forms separately by types of operation; an analysis of multi-unit wholesalers, showing the number of establishments, net sales, expenses, employees and pay roll by ownership groups; and a tabulation of the data for auxiliary units of wholesale organizations not included as establishments.

Volume II - States and 25 Selected Cities. Presents number of establishments, net sales, expenses, personnel, pay roll and stocks for each State and for each of 25 selected wholesale trade centers (Table 1). The data are analyzed by types of operation and by kinds of business.

Volume III - Cities and Counties. Presents number of establishments, net sales, personnel and pay roll for each city of more than 5,000 population and for each county (Table 13). The data are analyzed by types of operation and by kinds of business for cities of more than 50,000 population (Table 12A) and by kinds of business for cities of 20,000 to 50,000 population (Table 12B).

Volume IV - Kinds of Business of Full-Service and Limited Function Wholesalers, By States. Presents, by States, the number of establishments, net sales, expenses, personnel, pay roll and stocks for each of 29 kind-of-business groups (Table 1A). In a separate section the number of establishments, net sales, proprietors, employees and total pay roll are shown for 142 kinds of business, by States (Table 1B).

Volume V - Employment and Pay Roll.

a. Monthly employment data by kinds of business (Table 2).

b. Analysis of employment and pay roll by occupational groups (executive, office and clerical, selling, etc.) for a representative week of 1935 (Table 3).

Volume VI - Business-Size Groups, and Analysis of Operating Expenses.

a. Number of establishments, net sales and operating expenses of wholesale merchants and industrial distributors, by business-size groups and kinds of business (Table 4).

b. Functional division of operating expenses (administrative, selling, etc.) of wholesale merchants and industrial distributors, by kinds of business (Table 5).

Volume VII - Credit Sales, and Sales by Classes of Customers.

a. Credit business of full-service and limited-function wholesalers and of manufacturers' sales branches, by kinds of business (Table 6).

b. Business of wholesale establishments analyzed to show sales to retailers, to industrial users, to household consumers, to other wholesale organizations and sales for export separately (Table 7). The data are presented by types of operation and kinds of business.

Volume VIII - Commodity Sales. Analysis of sales of wholesale establishments by commodities or lines of merchandise (Table 8). Data are shown for 100 major commodity lines, many of which are subdivided into detailed commodity items. In this volume the relative importance of the various commodities is shown for each of the 29 kind-of-business groups.

Special Subject Reports. Special reports are scheduled in which the available census data are assembled and analyzed. Among those in preparation, the completion of which is subject to the limitations of time and budget, are:

Cooperative and Voluntary Group Wholesaling (Grocery Trade)
Drug Wholesaling
Electrical Wholesaling
Tobacco Wholesaling
Wholesaling of Wines and Liquors
Wholesaling of Tires and Tubes

CONFIDENTIAL GOVERNMENT REPORT

Section 8 of the Act creating the Department of Commerce and Labor, approved February 14, 1903, provides that: "The Secretary of Commerce shall from time to time make such special investigations and reports * * * which he himself may deem necessary and urgent." Acting upon this authority, I have authorized and instructed the Director of the Census to take a Census of Business covering the calendar year 1935. We ask for the cooperation and assistance of the business men of the United States in this undertaking and assure them that their individual reports will be held *absolutely confidential.* Only sworn employees of the Bureau of the Census will be permitted to examine your report, and no information will be given to any person, whether in Government service or private life, which would disclose, exactly or approximately, any of the facts or figures in your report. The information will be used for *statistical purposes only.*

DANIEL C. ROPER, *Secretary of Commerce.*

Form 31
CENSUS OF BUSINESS
Federal Works Project

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

SUPERVISOR'S DISTRICT
No. _____
State _____
ENUMERATION DISTRICT
No. _____
County _____
CONSECUTIVE NUMBER OF REPORT
No. _____

WHOLESALE SCHEDULE

CENSUS OF BUSINESS: 1935

A separate report should be prepared for each wholesale distributing establishment or agency. Combined reports for two or more establishments, even though under the same management or ownership, cannot be accepted except on special instruction from Washington.

This report should cover, if possible, the full calendar year operations for 1935, even if ownership has changed during the year.

1. DESCRIPTION OF ESTABLISHMENT:

a. NAME OF ESTABLISHMENT _____

b. NAME OF OWNER _____ RACE (*not for corporations*) _____ (White, Negro, Oriental, Other)

c. LOCATION OF ESTABLISHMENT
- State _____ County _____ Township _____
- Name of city, town, or village _____
- Street and number _____
- Is this street number located within the corporate limits of the city, town, or village named above? (*Yes or No*) _____

d. ADDRESS (HOME-OFFICE OR BUSINESS ADDRESS) OF OWNER _____

e. LEGAL FORM OF ORGANIZATION (Place check mark in proper square)
- ☐ Individual proprietorship.
- ☐ Partnership.
- ☐ Corporation.
- ☐ Other (specify): _____

(1) _____
(2) _____
(3) _____
(4) _____
(CODE—Do not use)

f. WAS THIS ESTABLISHMENT IN OPERATION DURING ANY PART OF 1933? (*Yes or No*) _____

g. Indicate whether since December 31, 1933, this establishment changed—

If changes occurred, give former—

(Check here)
- ☐ Name _____
- ☐ Location _____
- ☐ Ownership _____
- ☐ General nature of business _____

h. NUMBER OF WHOLESALE ESTABLISHMENTS OWNED BY THIS ORGANIZATION, ANYWHERE IN THE CONTINENTAL UNITED STATES (*including the establishment for which this report is prepared*) _____

i. GIVE ADDRESSES OF WAREHOUSES, TERMINALS, AND OTHER STORAGE FACILITIES IN THIS CITY OPERATED FROM THIS OFFICE AND INCLUDED IN THIS REPORT:

(Name) (City) (Street address)

_____

_____

_____

j. IS THIS ESTABLISHMENT OPERATED BY, OPERATING, OR SPONSORING A COOPERATIVE OR VOLUNTARY GROUP OF RETAILERS? (*Yes or No*) _____

If yes: (1) Under what name? _____ Since what date? (*month and year*) _____

(2) What percentage of your 1935 sales was made to retail members of this group? _____ percent.

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2. KIND OF BUSINESS, 1935:

a. Kind of business _____

(Give usual name or designation by which the establishment is known to the trade or public)

EXAMPLES.—Wholesale grocer, hardware wholesaler, sugar broker, flour jobber, mill and mine supply house, cotton broker, jewelry wholesaler, oil well supply house, etc.

b. Name the principal lines of merchandise sold or handled, *in order of their importance*, based on net sales in 1935:

(1) _____ (3) _____ (5) _____

(2) _____ (4) _____ (6) _____ (7) _____ (8) _____ (CODE—Do not use)

c. State the approximate radius (in miles) within which 75 percent of your 1935 sales were concentrated: _____ (Miles)

3. TYPE OF OPERATION IN 1935:

(Check the principal function performed or type of operation; i. e., the function or type that accounts for more than 50 percent of the business of the establishment.)

CHECK ONLY ONE

Service Wholesalers

- ☐ Wholesale merchant or jobber (*full service*) — 00
- ☐ Converter — 02
- ☐ Export merchant — 03
- ☐ Importer — 04
- ☐ Industrial distributor — 05

Limited Function Wholesalers

- ☐ Cash-and-carry wholesaler — 06
- ☐ Drop shipper or desk jobber — 07
- ☐ Mail-order wholesaler — 08
- ☐ "Wagon distributor" — 09

Wholesale Unit of Cooperative or Voluntary Chain

- ☐ Retailer operated — 44
- ☐ Wholesaler sponsored or affiliated — 01
- ☐ Other (*describe*) _____

Storage Units

- ☐ Bulk tank station (*petroleum—including commission distributors*) — 41
- ☐ Distributing terminal (*petroleum*) — 42
- ☐ Chain-store warehouse — 43

Manufacturer's Sales Branch (Owned by Manufacturer)

- ☐ Carrying stock for delivery — 11
- ☐ Carrying no stock — 12

Assemblers and Country Buyers

- ☐ Assembler or country buyer of farm products — 31
- ☐ Cream station — 32
- ☐ Cooperative marketing association (*mainly in farm products*) — 33
- ☐ Elevator (*grain*) — 34
- ☐ Packer and shipper — 35

Agents and Brokers

- ☐ Auction company — 21
- ☐ Broker — 22
- ☐ Commission merchant — 23
- ☐ Export agency — 24
- ☐ Import agency — 25
- ☐ Manufacturer's agent (*for two or more manufacturers*) — 26
- ☐ Selling agent — 27
- ☐ Other agent: (*Specify*) _____

Other Types

- ☐ Specify _____

4. NET SALES AND OTHER OPERATING RECEIPTS:

(Brokers and wholesale agents must report selling value of goods and not commissions received.)

		Key
a. Net sales of merchandise (*including all forms of sales taxes*) (Do not include returned goods and allowances.)	$	A–1 E–1
b. Amount of sales, turnover, gasoline, and other commodity taxes paid by you directly to any governmental agency and included in 4*a*, above	$	
c. Net sales of merchandise *less* commodity and sales taxes (*difference between a and b*) (Include taxes which are in the price paid by you for goods.)	$	C–1
d. Of the total sales reported under *c*, above, give the amount of— (The sum of 1, 2, 3, 4, and 5, below, must equal the amount reported under *c*, above.)		
I. DOMESTIC SALES:		
(1) Sales to retailers for resale (*including sales to chains, mail-order houses, department stores, and independent stores*)	$	C–2
(2) Sales to household consumers, including employees (*at retail*)	$	C–3
(3) Sales to industrial and other large users (*sales to manufacturers, railroads, utilities, governmental bodies, hotels, institutions, contractors, oil wells, etc.*)	$	C–4
(4) Sales to other wholesale organizations (*including export concerns and supply houses*)	$	C–5
II. EXPORT SALES:		
(5) Sales made direct to buyers in foreign countries	$	C–6
e. How much of total net sales represented credit business? (Include sales made on weekly, 10-day, 30-day, and end-of-month, installment, or other credit basis—all except *strictly* cash and c. o. d. sales.)	$	A–2
f. State amount of operating receipts from services and sources other than sale of merchandise	$	B–1

5. STOCKS ON HAND:

		Key
a. Inventory of merchandise on hand at actual cost value as of December 31, 1935, or nearest inventory date (*including goods out on consignment*)	$	B–2
b. Value of goods held on consignment by you as consignee	$	B–3

6. PROPRIETORS AND FIRM MEMBERS (does not apply to corporations):

		Key
a. TOTAL number of proprietors and firm members (*including those reported under b, below*)		B–4
b. Number of proprietors and firm members devoting major portion of their time to the business		B–5

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7. PAID EMPLOYEES AND WEEKLY PAY ROLLS:

(Do not include in this inquiry persons reported in Inquiry 6, above.)

EMPLOYMENT AND PAY-ROLL DATA FOR FULL-TIME AND PART-TIME EMPLOYEES FOR ONE WEEK ONLY

(Give figures for week ending Oct. 26, 1935. For highly seasonal businesses, report instead one week of normal employment during active season.)

Week covered: From _____, 1935, to _____, 1935

ITEM	Full-time: Number of paid full-time employees during the week — Field 1	Key	Full-time: Pay roll for the week for full-time employees (*salaries, wages, bonuses, and commissions*) — Field 2	Part-time: Number of paid part-time employees during the week — Field 3	Key	Part-time: Pay roll for the week for part-time employees (*salaries, wages, bonuses, and commissions*) — Field 4
a. Executives and salaried corporation officers	D 1		$			$
b. Office and clerical employees (*not including selling employees*)	D-2		$			$
c. Inside selling employees	D-3		$			$
d. Outside selling employees	D-4		$			$
e. Warehouse employees (*including supervisors and shipping clerks*)	D-5		$			$
f. Other employees	D-6		$			$
g. TOTAL (*sum of a, b, c, d, e, and f*)	D-7	A-3	$		B-6	$

		Key
h. How many of the total number of employees shown above (*full-time and part-time combined*) are	Males	B-7
	Females	B-8
i. Total pay roll for the year 1935 for full-time and part-time employees (*salaries, wages, bonuses, and commissions*) $ (Do not include proprietors' and partners' compensation, but include that of officers of corporation.)		A-4
j. How much of the total pay roll (*i, above*) was paid to part-time employees? $		A-5
k. How many of the total number of employees shown above (*full-time and part-time combined*) are Negroes?		B-9

(9) _____

(CODE—Do not use)

l. TOTAL number of paid employees (*full-time and part-time combined*) working during the pay period ending nearest the 15th of each month of 1935:

MONTH, 1935	NUMBER	Key	MONTH, 1935	NUMBER	Key	MONTH, 1935	NUMBER	Key	MONTH, 1935	NUMBER	Key
		F-1			F-1			F-2			F-2
Jan		1	Apr		4	July		1	Oct		4
Feb		2	May		5	Aug		2	Nov		5
Mar		3	June		6	Sept		3	Dec		6
								(Do not use)			B-10

8. OPERATING EXPENSES (not including cost of merchandise):

(Include pay rolls here as well as in Inquiry 7, above.)

I. To be answered by WHOLESALE MERCHANTS and INDUSTRIAL DISTRIBUTORS whose 1935 sales exceeded $50,000. All other wholesale establishments may use block II, below:

	Key
a. ADMINISTRATIVE EXPENSES (*such as officers' salaries and traveling expenses; office salaries, professional services, office supplies and stationery; postage, etc.*) $	E-2
b. SELLING EXPENSES (*such as salesmen's salaries, commissions and expenses; house salesmen's salaries; advertising, etc.*) $	E-3
c. DELIVERY EXPENSES (*such as out-freight, express, parcel post, trucking, etc.*) $	E-4
d. WAREHOUSE EXPENSES (*such as warehouse salaries, boxing and packing, warehouse lighting, etc.*) $	E-5
e. OCCUPANCY EXPENSES (*such as rent; maintenance labor; heat, light, power, and water; building repairs and supplies; insurance and taxes on building, etc.*) $	E-6
f. OTHER EXPENSES (*such as interest on bank loans, losses from bad debts, etc.*) $	
g. TOTAL OPERATING EXPENSES including pay roll (*sum of a to f*) $	A-6 / E-7

II. To be answered by all wholesale establishments which do not answer block I, above.

TOTAL operating expenses including pay roll (*do not include cost of merchandise*) $ — A-6

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9. SALES OF MERCHANDISE BY COMMODITIES:

If book figures are not available, give the best possible approximations.

Total commodity sales (same as 4*a*) ..... $ .....

Key G-1

Commodities — Key G-3	Sales — Key G-4	Sales — Key G-2
FOOD AND RELATED PRODUCTS		
10. Bakery Products (bread, biscuits, crackers, etc.)		$
20. Beer and Other Fermented Malt Liquors		$
30. Butter and Cheese		$
40. Canned Goods, Total (sum of 41 to 46)		$
41. Canned fruits	$	
42. Canned vegetables	$	
43. Canned fish and sea foods	$	
44. Canned meats	$	
45. Canned milk (condensed, evaporated, and powdered)	$	
46. Other canned foods	$	
50. Coffee, Total (sum of 51 and 52)		$
51. Green	$	
52. Roasted	$	
60. Confectionery, Total (sum of 61 to 64)		$
61. Candy	$	
62. Chewing gum	$	
63. Ice cream and frozen ices	$	
64. Other confectionery	$	
70. Dairy and Poultry Products, Except Butter and Cheese, Total (sum of 71 to 74)		$
71. Eggs	$	
72. Milk and cream, fluid	$	
73. Poultry	$	
74. Other dairy and poultry products (Report canned milk under 45, and not here.)	$	
80. Fish and Sea Foods, Total (sum of 81 to 84)		$
81. Fresh fish	$	
82. Cured and processed fish	$	
83. Frozen fish	$	
84. Other sea foods (except canned)	$	
90. Flour		$
100. Fruits and Vegetables, Fresh, Total (sum of 101 and 102) (Report dried fruits and vegetables under 119, and not here.)		$
101. Fruits, fresh	$	
102. Vegetables, fresh	$	
110. Groceries (except as listed), Total (sum of 111 to 119)		$
111. Cereal preparations (except flour and bakery products)	$	
112. Extracts and spices	$	
113. Lard substitutes and cooking fats	$	
114. Nuts (all kinds) (Report unroasted peanuts under 260, and not here.)	$	
115. Oleomargarine and other butter substitutes	$	
116. Pickles, preserves, jellies, jams, and sauces	$	
117. Rice	$	
118. Teas	$	
119. Other groceries (see item 121)	$	
120. Meats and Meat Products, Total (sum of 121 to 124)		$
121. Lard	$	
122. Meats, fresh	$	

Commodities — Key G-3	Sales — Key G-4	Sales — Key G-2
FOOD AND RELATED PRODUCTS—Con.		
120. Meats and Meat Products—Con.		
123. Meats, cured or smoked	$	
124. Other meat products (including game)	$	
(Report canned meats under 44, and not here.)		
130. Soft Drinks		$
140. Sugar		$
150. Wines and Spiritous Liquors, Total (sum of 151 and 152)		$
151. Liquors, distilled and ethyl alcohol	$	
152. Wines	$	
160. Other Food and Related Products (specify)		$
.....	$	
.....	$	
.....	$	
FARM PRODUCTS—RAW MATERIALS		
170. Cotton, Raw, Including Linters		$
180. Feed, Total (sum of 181 and 182)		$
181. Hay, straw, and alfalfa	$	
182. Mixed and other feeds	$	
190. Grains, Total (sum of 191 to 193)		$
191. Corn	$	
192. Wheat	$	
193. All other	$	
200. Hides, Skins, and Raw Furs		$
210. Livestock, Total (sum of 211 to 215)		$
211. Cattle (including calves)	$	
212. Hogs	$	
213. Horses and mules	$	
214. Sheep and lambs	$	
215. Other livestock	$	
220. Seeds (field, garden, and flower)		$
230. Silk, Raw		$
240. Tobacco, Leaf		$
250. Wool, Raw (whether in the grease, scoured, or carbonized)		$
260. Other Farm Products—Raw Materials (specify—include unroasted peanuts here)		$
.....	$	
.....	$	
.....	$	
.....	$	
CLOTHING, DRY GOODS, AND TEXTILES		
270. Clothing and Furnishings, Men's and Boys', Total (sum of 271 to 274)		$
271. Hats and caps and hat and cap materials	$	
272. Men's and boys' furnishings (except shoes)	$	
273. Men's and boys' suits and overcoats	$	
274. Work clothing	$	
280. Clothing and Accessories, Women's and Children's, Total (sum of 281 to 288)		$
281. Girls' wear	$	
282. Infants' wear	$	
283. Dresses (women's and misses')	$	
284. Hosiery (women's and misses')	$	

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9. SALES OF MERCHANDISE BY COMMODITIES—Continued.

Commodities	Sales	
Key G-3	Key G-4	Key G-2
CLOTHING, DRY GOODS, AND TEXTILES—Con.		
280. Clothing and Accessories, Women's and Children's—Continued.		
285. Millinery and millinery supplies	$	
286. Underwear, negligees, corsets, and robes	$	
287. Women's and misses' suits and coats (except fur coats)	$	
288. Other women's and misses' furnishings and wearing apparel (except shoes and furs)	$	
290. Dressed Furs and Fur Clothing		$
300. Notions (such as sewing, hair, and shoe accessories)		$
310. Piece Goods, Total (sum of 311 to 319)		$
311. Cotton piece goods	$	
312. Jute fabrics	$	
313. Linens	$	
314. Rayons	$	
315. Silks and velvets	$	
316. Woolens and worsteds	$	
317. Domestics (sheets, spreads, and comfortables)	$	
318. Curtains, draperies, and curtain, drapery, and upholstery fabrics	$	
319. Other piece goods and yard goods	$	
320. Shoes and Other Footwear, Total (sum of 321 to 326)		$
321. Men's and boys' leather	$	
322. Men's and boys' rubber	$	
323. Women's and children's leather	$	
324. Women's and children's rubber	$	
325. Infants'	$	
326. All other	$	
330. Yarns, Total (sum of 331 to 335)		$
331. Cotton yarns (combed, carded or mercerized)	$	
332. Rayon yarns (all kinds)	$	
333. Silk (spun or thrown)	$	
334. Woolen and worsted yarns	$	
335. All other	$	
340. Dry Goods and Textile Products Not Listed Above (specify)		$
_____	$	
_____	$	
_____	$	
AUTOMOBILES AND AUTOMOTIVE EQUIPMENT		
350. Automobiles and Other Motor Vehicles, Total (sum of 351 to 354)		$
351. Automobiles (passenger cars)	$	
352. Trucks, busses, taxicabs, and other commercial vehicles	$	
353. Tractors	$	
354. Motorcycles	$	
360. Automotive Equipment, Parts and Accessories, Total (sum of 361 to 363)		$
361. Batteries	$	
362. Tires and tubes	$	
363. Other automotive equipment, accessories, and parts	$	
CHEMICALS, DRUGS, AND RELATED PRODUCTS		
370. Drugs and Drug Sundries, Total (sum of 371 to 374)		$
371. Druggists' rubber goods	$	
372. Drugs, chemicals, and pharmaceuticals	$	
373. Proprietary medicines	$	

Commodities	Sales	
Key G-3	Key G-4	Key G-2
CHEMICALS, DRUGS, AND RELATED PRODUCTS—Con.		
370. Drugs and Drug Sundries—Con.		
374. Drug sundries not listed elsewhere. (Report soap under 410; toilet articles and preparations under 410, and not here.)	$	
380. Industrial and Heavy Chemicals (including coal tar and other synthetic organic chemicals)		$
390. Oils, Animal and Vegetable (including cottonseed, linseed, essential, etc.). (Report petroleum and its products under 760; cooking fats under 113, and not here.)		$
400. Paints, Varnishes, Lacquers, and Enamels		$
410. Soaps and Toilet Articles and Preparations, Total (sum of 411 to 414)		$
411. Toilet articles (such as brushes, combs, dresser sets, atomizers, manicure implements, etc.)	$	
412. Toilet preparations, except soaps (such as perfumes, powders, rouges, depilatories, creams, etc.)	$	
413. Toilet soaps	$	
414. Other soaps	$	
420. Other Chemicals or Related Products Not Listed Elsewhere (specify), Total		$
_____	$	
_____	$	
_____	$	
ELECTRICAL COMMODITIES		
430. Wiring Supplies and Construction Materials, Total (sum of 431 to 434)		$
431. Interior wiring and construction materials (such as conduit and fittings, wires and cables, wiring devices, safety switches, panels, fuses, etc.)	$	
432. Outside construction materials (such as poles, cross-arms, pole-line hardware, etc.)	$	
433. Lighting fixtures (residential, commercial, and industrial)	$	
434. Incandescent lamps	$	
440. Apparatus and Equipment (such as motors, generators, switchboards, industrial heating equipment, power transformers, etc.)		$
450. Radio, Appliances and Specialties, Total (sum of 451 to 453)		$
451. Radio sets, tubes, parts, and accessories; public-address equipment; radio-phonograph combinations and records	$	
452. Electric refrigerators (household and commercial)	$	
453. All other electrical appliances and specialties (such as clocks, fans, flashlights, food mixers, heating appliances, ranges, water heaters, washing and ironing machines, vacuum cleaners, etc.)	$	
FURNITURE AND HOUSE FURNISHINGS		
460. China, Glassware, and Crockery		$
470. Furniture, Wooden and Metal, Total (sum of 471 and 472) (Report second-hand furniture under 980; electric refrigerators under 452; gas refrigerators under 512, and not here.)		$
471. Household furniture	$	
472. Office and store furniture	$	
480. House Furnishings, Total (sum of 481 to 483) (Report china, glassware, and crockery under 460; gas refrigerators under 512; electric refrigerators under 452; furniture under 470; stoves, ranges, etc., under 516, and not here.)		$
481. Carpets and rugs	$	
482. Linoleum, felt base, and all other floor coverings	$	

9. SALES OF MERCHANDISE BY COMMODITIES—Continued.

Commodities	Sales	
Key G-3	Key G-4	Key G-2
FURNITURE AND HOUSE FURNISHINGS—Con.		
480. House Furnishings—Con.		
483. House furnishings, not listed elsewhere	$	
490. Musical Instruments, Accessories, and Parts (Report radios and parts and talking machines combined with radios under 451, and not here.)		$
HARDWARE AND KINDRED PRODUCTS		
500. Hardware, Total (sum of 501 to 506) (Report iron and steel sheets and shapes under 640; pipe fittings and valves under 514, and not here.)		$
501. Builders' hardware	$	
502. Heavy hardware	$	
503. Shelf or light hardware	$	
504. Tools and cutlery (Report machine tools under 572, and not here.)	$	
505. Wire screening	$	
506. All other hardware, not listed elsewhere	$	
510. Plumbing, Heating, and Air-Conditioning Equipment and Supplies, Total (sum of 511 to 516) (Report pipe under 640 or 650, and not here.)		$
511. Air-conditioning equipment	$	
512. Gas appliances and supplies	$	
513. Oil burners	$	
514. Pipe fittings, valves, brass goods, and specialties	$	
515. Plumbing fixtures, equipment and supplies (including sanitary ware)	$	
516. Stoves, ranges, furnaces, heating apparatus, and parts (except gas and electric)	$	
520. Sporting Goods (including arms, ammunition, and bicycles) (Report sport clothing under 270, 280, or 320, and not here.)		$
530. Toys and Games		$
MACHINERY, EQUIPMENT, AND SUPPLIES		
540. Barber and Beauty-Parlor Equipment and Supplies Not Listed Elsewhere		$
550. Farm and Garden Machinery, Equipment and Supplies (Report wire fencing under 647, and not here.)		$
560. Industrial Equipment and Supplies, Total (sum of 561 to 566) (Report electrical equipment under 430 and 440; railroad equipment and supplies under 590, and not here.)		$
561. Belting, hoso, packing, and mechanical rubber goods	$	
562. Power transmission equipment (such as pulleys, hangers, bearings)	$	
563. Materials-handling equipment (such as trucks, casters, and hoists)	$	
564. Metal-working tools (such as drills, reamers, taps, dies, grinding wheels metal-cutting saws and files)	$	
565. Rope, cordage, and twine (Report wire rope under 648, and not here.)	$	
566. Other industrial equipment and supplies (Report railroad equipment and supplies under 590, and not here.)	$	
570. Industrial Machinery, Total (sum of 571 to 577)		$
571. Construction machinery	$	
572. Machine tools (power driven)	$	
573. Mining, quarrying, well-drilling, and pumping machinery	$	
574. Oil-well and oil-refining machinery, equipment, and supplies	$	

Commodities	Sales	
Key G-3	Key G-4	Key G-2
MACHINERY, EQUIPMENT, AND SUPPLIES—Con.		
570. Industrial Machinery—Con.		
575. Power plant machinery and equipment (except electrical machinery)	$	
576. Textile machinery	$	
577. Industrial machinery not listed elsewhere	$	
580. Office and Store Machines and Equipment Not Listed Elsewhere, Total (sum of 581 and 582)		$
581. Office machines and equipment (such as typewriters, cash registers, computing and manifolding machines, scales, etc.) (Report metal furniture under 472, and not here.)	$	
582. Store fixtures and equipment	$	
590. Railroad Equipment and Supplies		$
600. Surgical, Dental, and Hospital Equipment and Supplies		$
METALS AND METAL WORK		
610. Aluminum Ingots, Bars, Shapes, Sheets, Wire, Tubes, and Castings		
620. Building Metal Work (such as fire escapes, elevator cages, grilles, ornamental metal work, etc.)		$
630. Copper (including ingots, bars, shapes, sheets, bare wire, pipe, tubes, castings, etc.)		$
640. Iron and Steel and Products, Except Scrap, Total (sum of 641 to 649) (Report wire screening under 505, and not here.)		$
641. Iron and steel pipe (including cast, lap weld, butt weld, and riveted)	$	
642. Seamless steel tubing	$	
643. Pig iron	$	
644. Rough castings and forgings (except cast-iron pipe)	$	
645. Steel sheet (including tin and terno plate)	$	
646. Structural iron and steel and reinforcing bars and rods	$	
647. Wire fencing (woven or welded)	$	
648. Wire and wire rope or cable	$	
649. All other rolled iron and steel (including bars, rods, rails, plates, and shapes not listed above)	$	
650. Lead (metallic) and Zinc (including pig, bar, sheet, shapes, pipe, and plates)		$
660. Metallic Ores (specify kind)		$
670. Scrap Iron and Steel		$
680. Sheet-Metal Work (such as steel garages, ventilators, metal storage tanks, and metal roofing)		$
690. Other Nonferrous Metals (except precious metals), Bars, Sheets, Shapes, Wire and Castings, Nonferrous Alloys and Ferro-Alloy Materials		$
NONMETALLIC MINERALS AND THEIR PRODUCTS		
700. Brick, Tile, and Terra Cotta		$
710. Building Stone, Slate, and Concrete Products		$
720. Cement, Lime, Plaster, and Stucco		$
730. Coal and Coke, Total (sum of 731 to 733)		$
731. Anthracite coal	$	
732. Bituminous coal	$	
733. Coke	$	
740. Crude Nonmetallic Minerals and Their Products Not Listed Elsewhere (Report agricultural limestone and ground phosphate rock under 900, and not here.)		$
750. Glass (sheet and containers), Total (sum of 751 and 752)		$
751. Sheet glass (including window and plate glass)	$	
752. Glass containers	$	

9. SALES OF MERCHANDISE BY COMMODITIES—Continued.

Commodities	Sales	
Key G–3	Key G–4	Key G–2
NONMETALLIC MINERALS AND THEIR PRODUCTS—Con.		
760. Petroleum and Its Products, Total (sum of 761 to 767)		$
761. Crude oil	$	
762. Gasoline and naphthas	$	
763. Fuel oils, gas oils, and furnace oils	$	
764. Kerosene	$	
765. Lubricants, automotive	$	
766. Lubricants, other than automotive	$	
767. All other petroleum products	$	
770. Sand, Gravel, and Crushed Stone		$
WOOD, PAPER, AND THEIR PRODUCTS		
780. Books, Magazines, and Other Printed Materials (including sheet music) (Report blank books under 830, and not here.)		$
790. Logs, Poles, Posts, Hewn Ties, Pulpwood and Cordwood (see 432)		$
800. Lumber (rough, dressed, and finished)		$
810. Paper Goods, Such as Paper Boxes, Bags, Cups, Dishes, Napkins, Towels, Patterns, Etc. (Report stationery under 830, and not here.)		$
820. Paper, Uncoated Book, Board, Wall Paper, and Other, Total (sum of 821 to 823) (Report stationery under 830, and not here.)		$
821. Cardboard and paper board	$	
822. Uncoated book	$	
823. Wall paper	$	
830. Stationery and Stationery Supplies (including typewriter paper)		$
840. Planing-mill Products—Woodwork and Other Wood Products		$
COMMODITIES NOT GROUPED ELSEWHERE		
850. Aircraft and Parts, Total (sum of 851 to 853)		$
851. Heavier than air	$	
852. Lighter than air	$	
853. Equipment and supplies	$	
860. Boats (including motor, sail, and steam)		$

Commodities	Sales	
Key G–3	Key G–4	Key G–2
COMMODITIES NOT GROUPED ELSEWHERE—Con.		
870. Building Materials Not Listed Elsewhere (such as wall board, roofing, etc.) (See items 430, 591, 510, 620, 646, 680, 709, 710, 720, 750, 770, 800, 820, 840 for major classes of building materials.)		$
880. Cameras and Photographic Supplies		$
890. Cigars, Cigarettes, and Tobacco, Total (sum of 891 to 893) (Report leaf tobacco under 240, and not here.)		$
891. Cigars	$	
892. Cigarettes	$	
893. Tobacco	$	
900. Fertilizer and Fertilizer Materials		$
910. Jewelry, Silverware, Etc., Total (sum of 911 to 914)		$
911. Clocks and watches	$	
912. Jewelry	$	
913. Precious stones and precious metals	$	
914. Silverware and plated ware	$	
920. Junk and Scrap (Report scrap iron and steel under 670, and not here.)		$
930. Leather and Cut Stock		$
940. Luggage, Saddlery, and Harness, and All Other Products Made of Leather Except Boots, Shoes, Clothing, and Leather Belting (Report shoes and other footwear under 320; clothing under 270 and 280; leather belting under 561, and not here.)		$
950. Motion Picture Film Rentals		$
960. Optical Goods		$
970. Rubber, Crude		$
980. Second-hand Merchandise (specify kind), Total		$
_____	$	
_____	$	
_____	$	
990. Miscellaneous Groups of Commodities (specify kind), Total		$
_____	$	
_____	$	
_____	$	

Remarks: _____

CERTIFICATE

This is to certify that the information contained in this schedule is correct and complete to the best of my knowledge and belief, and covers the period from _____, 19____, to _____, 19____

_____
(Signature and official title of person furnishing the information)

_____, 1936.
(Date of signature)

_____
(Signature of enumerator)

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